



Drinking Water Surveillance Program

**FORT ERIE
(ROSEHILL)
WATER TREATMENT
PLANT**

Annual Report 1988



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FORT ERIE (ROSEHILL)
WATER TREATMENT PLANT

DRINKING WATER SURVEILLANCE
PROGRAM

ANNUAL REPORT 1988

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EXECUTIVE SUMMARY

DRINKING WATER SURVEILLANCE PROGRAM

FORT ERIE WATER TREATMENT PLANT 1988 ANNUAL REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The Fort Erie (Rosehill) Water Treatment Plant is a conventional treatment plant which treats water from Lake Erie. The process consists of coagulation, flocculation, sedimentation, filtration and disinfection. This plant has a design capacity of 50 x 1000 m³/day and serves a population of approximately 25,000.

Water samples from the raw, treated and two distribution sites were taken on a monthly basis and analyzed for approximately 160 parameters. Parameters were divided into the following groups: Bacteriological, Inorganic and Physical (Laboratory Chemistry, Field Chemistry and Metals) and Organics (Chloroaromatics, Chlorophenols, Pesticides and PCB, Phenolics, Polynuclear Aromatic Hydrocarbons, Specific Pesticides and Volatiles). Specific Pesticides and Chlorophenols were analysed in June and November only.

A summary of results is shown in Table 1.

Inorganic and Physical parameters (Laboratory Chemistry, Field Chemistry and Metals) were below any applicable health related ODWOS.

Of approximately 110 Organic parameters tested for on a monthly basis, none exceeded health related guidelines.

During 1988 the DWSP sampling results indicated that the Fort Erie (Rosehill) Water Treatment Plant produced good quality water at the plant and this quality was maintained in the distribution system.

TABLE 1

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE (ROSEHILL WTP)

SUMMARY TABLE BY SCAN

SCAN	RAW		TREATED		SITE 1		SITE 2					
	TESTS	POSITIVE XPOSITIVE	TESTS	POSITIVE XPOSITIVE	TESTS	POSITIVE XPOSITIVE	TESTS	POSITIVE XPOSITIVE				
BACTERIOLOGICAL	36	31	86	42	7	16	51	19	37	35	12	34
CHEMISTRY (FLD)	31	30	96	66	66	100	99	99	100	55	55	100
CHEMISTRY (LAB)	206	168	81	246	175	71	395	336	85	279	247	88
METALS	217	112	51	288	127	44	517	295	57	376	205	54
CHLORODROMATICS	140	0	0	168	0	0	98	0	0	98	0	0
CHLOROPHENOLS	12	0	0	12	0	0	.	.	.	.	.	.
PAN	153	0	0	170	0	0	.	.	.	.	.	.
PESTICIDES & PCB	332	0	0	396	0	0	278	0	0	241	0	0
PHENOLICS	10	4	40	12	4	33	.	.	.	.	.	.
SPECIFIC PESTICIDES	56	0	0	56	0	0	0	0	0	0	0	0
VOLATILES	287	3	1	287	42	14	228	33	14	173	24	13
TOTAL	1480	348	1743	421	1666	782	1257	543				

NO HEALTH RELATED GUIDELINES WERE EXCEEDED

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
 A '.' INDICATES THAT NO SAMPLE WAS TAKEN

DRINKING WATER SURVEILLANCE PROGRAM

FORT ERIE (ROSEHILL) WATER TREATMENT PLANT 1988 ANNUAL REPORT

INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The DWSP was partially initiated at the Fort Erie (Rosehill) Water Treatment Plant in February of 1987; the full program began in June.

This report contains information and results for 1988.

PLANT DESCRIPTION

The Fort Erie (Rosehill) Water Treatment Plant is a conventional treatment plant which treats water from Lake Erie. The process consists of coagulation, flocculation, sedimentation, filtration and disinfection; powdered activated carbon is used for taste and odour control when necessary. This plant has a design capacity of 50 x 1000 m³/day and flows on day of sampling ranging from 12 x

1000 m³/day to 30 x 1000 m³/day. The plant serves a population of approximately 25,000.

The plant location is shown in Figure 1. Plant Process details, in a block schematic, are shown in Figure 2. General plant information is presented in Table 2.

METHODS

Water samples were obtained from four DWSP approved locations;

- i) Plant Raw - The water originated from the lowlift discharge prior to chlorination and was sampled through a stainless steel line. The sample tap is located near the lowlift well.
- ii) Plant Treated - The water originated from the highlift discharge after addition of all treatment chemicals and was sampled through a stainless steel sample line. The sample tap is located near the highlift pumps.
- iii) Distribution System - Site 1 - This house is approximately 4.1 kilometers from the plant. Water was sampled through copper plumbing from the basement laundry tap.
- iv) Distribution System - Site 2 - This house is approximately 10 kilometers from the plant. Water was sampled through copper plumbing from the kitchen tap.

FIGURE 1

DRINKING WATER SURVEILLANCE PROGRAM

SITE LOCATION MAP

FORT ERIE WATER TREATMENT PLANT

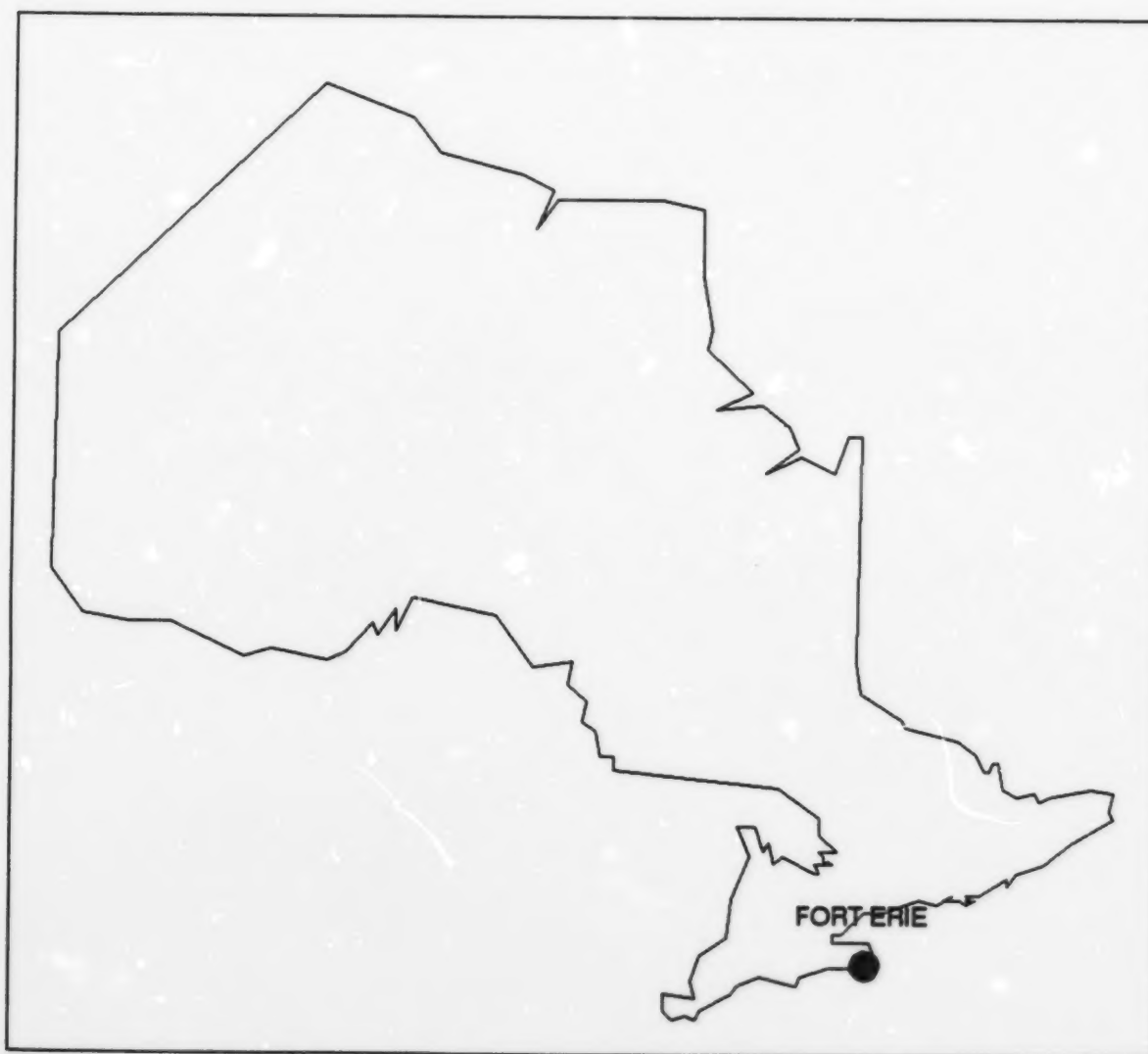


Figure 2

FORT ERIE (ROSE HILL) WATER TREATMENT PLANT

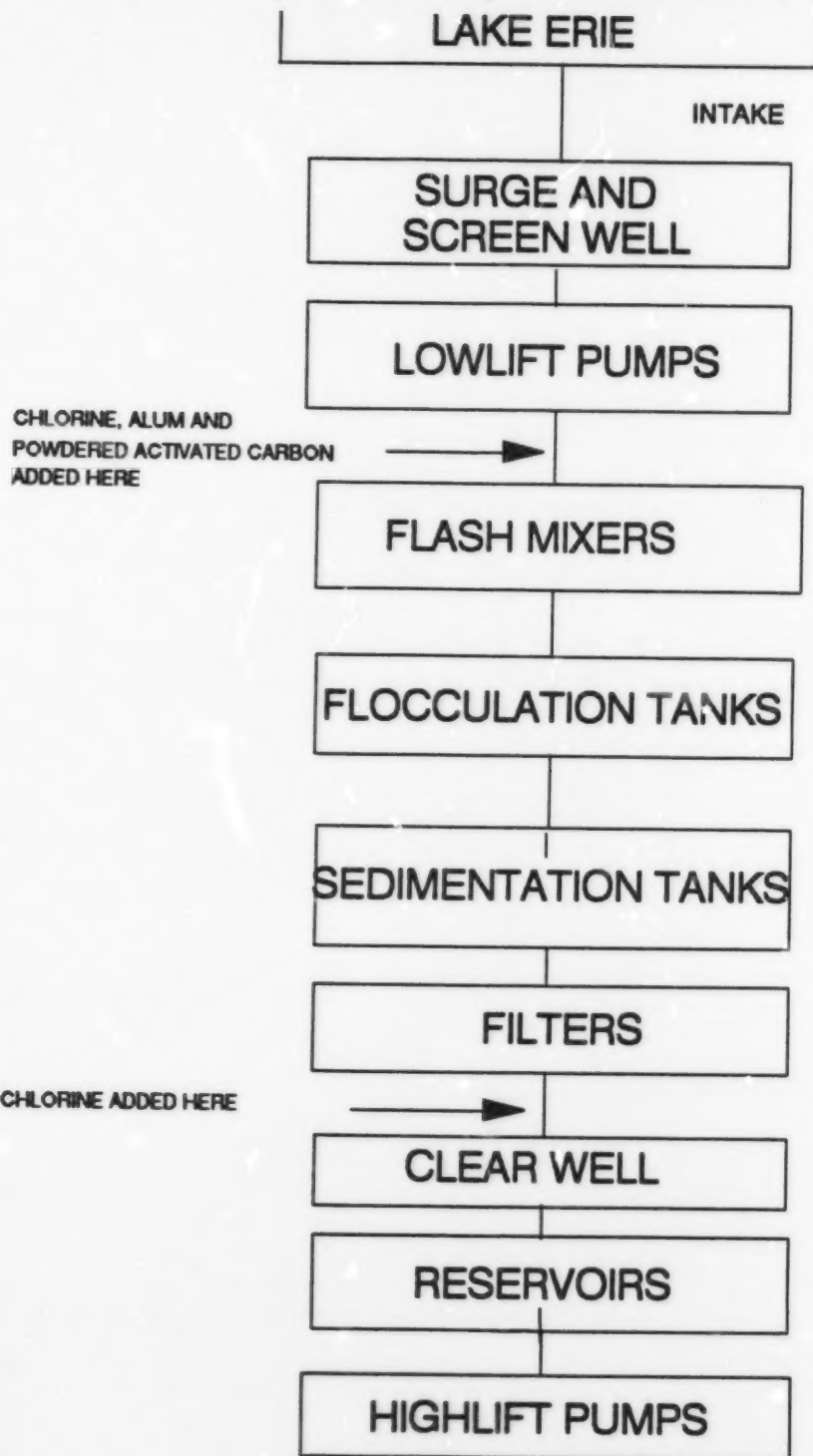


TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

Fort Erie (Rosehill) WATER SUPPLY SYSTEM

LOCATION: ROSEHILL ROAD
Fort Erie (Rosehill), ONTARIO
(416-871-3551)

SOURCE: RAW WATER SOURCE - LAKE ERIE

RATED CAPACITY: 50 (1000 M3/DAY)

OPERATION: MUNICIPAL

PLANT SUPERINTENDENT: MR. H. HODGSON

MINISTRY REGION: WEST CENTRAL

DISTRICT OFFICER: MR. J. MAYES

MUNICIPALITY
SERVED

POPULATION

Fort Erie (Rosehill)

25,000

Sample lines in the plant were flushed prior to sampling to ensure that the water obtained was indicative of its origin and not residual water standing in the sample line.

At both distribution system locations two types of samples were obtained: a standing and a free flow. The standing sample consisted of water that had been in the household plumbing and service connection for a minimum of six hours. These samples are used to make an assessment of the amount by which the levels inorganic compounds may be changed on standing due to leaching from (or deposition on) the plumbing system. The only analyses carried out on the standing samples therefore, are General Chemistry and Metals. The free flow sample represented fresh water from the distribution main that had been flowing at the sample tap for five minutes before being sampled.

Attempts were made to capture the same block of water at each sampling point by taking the retention time into consideration. The retention time was calculated by dividing the volume of water between the two sampling points by the sample day flow. For example, if it was determined that the retention time within the plant was five hours then there would be a five hour interval between the raw and treated sampling. Similarly if it was estimated that it took approximately one day for the water to travel from the plant to the distribution system site, this site

would be sampled one day after the treated water from the plant.

Stringent DWSP sampling protocols were followed to ensure that all samples were taken in a uniform manner.

Sample day flow, treatment chemical dosages and Field Chemistry measurements were recorded on the day of sampling and were entered on the DWSP database as submitted.

RESULTS

Water at the Fort Erie (Rosehill) Water Treatment Plant was sampled for approximately 160 parameters. The Specific Pesticides and Chlorophenols scans were sampled in June and November only.

Polynuclear Aromatic Hydrocarbons and Phenolics are only analysed in the raw and treated water at the plant. As a result of an unforeseen emergency the laboratory capacity was exceeded and analysis for volatiles could not be carried out when the samples were received. Since analysis for volatiles is no longer valid after four weeks of storage, volatile results for January and February are not available.

Table 3 contains information on the sample day retention time, flow rate and treatment chemicals used and their associated dosages.

Table 4 is a summary break-down of the number of water samples

analysed by parameter and by water type. The number of times that a positive or trace result was detected is also reported.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment (MOE) laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 presents the results for parameters detected on at least one occasion.

Table 6 lists all parameters analysed in the DWSP.

Associated guidelines and detection limits are also supplied on tables 5 and 6. Parameters are listed alphabetically within each scan.

DISCUSSION

General

Water quality is judged by comparison with the Ontario Drinking Water Objectives (ODWOs) as defined in the 1984 publication (ISBN 0-7743-8985-0). The Province of Ontario has health related and aesthetic objectives for 49 parameters, these are currently under

review. When an ODWO is not available guidelines/limits from other agencies are consulted. The Parameter Listing System (PALIS) recently initiated by the MOE catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Although some of the parameters measured on DWSP may be present in the raw and treated water as a result of pollution, many of the compounds detected are naturally occurring or are treatment by-products.

Plant operational personnel address occurrences of taste and odour or biological water quality parameters. The DWSP does not assess these aspects of the water supply.

As stated under Results, traces do not indicate quantifiable values, as defined by established MOE Laboratory analytical reporting protocols. While they can be useful in trend analysis or confirmation of the presence of a specific contaminant that is repeatedly detected at these levels, the occasional finding of a trace level of a contaminant is not considered to be significant. **DISCUSSION OF GUIDELINES AND LIMITS THEREFORE, IS ONLY CONDUCTED ON POSITIVE RESULTS.**

Bacteriology

Positive results for the Bacteriology scan were present seven times in the treated water, nineteen times in the Site 1 water and twelve times in the Site 2 water. The positive parameters were Standard Plate Count, Total Coliform and/or Total Coliform Background and the Presence/Absence test.

The results for the August Site 1 and Site 2 water samples should be discounted because these samples were not available for bacteriological analysis within the required time period.

Coliforms were detected by the membrane filtration test at 1 count/100mL in the July Site 1 sample.

Aeromonas was determined to be present in the July Site 1 water as a result of a positive Presence/Absence test.

Guidelines for bacteriological sampling and testing of a supply are developed to maintain a proper supervision of its bacteriological quality; the routine monitoring program usually requires the taking of multiple samples in a given system. Full interpretation of bacteriological quality cannot be made on the basis of single samples. Further, bacteriological limits were developed in acknowledgement that the presence of coliforms may be detected due to their non-uniform distribution throughout the distribution

system and the fact that their enumeration is subject to considerable variation. For these reasons, the occasional finding of low numbers of coliform organisms is not unexpected. Routine bacteriological monitoring, as outlined in the ODWOs is carried out by the operating authority.

Inorganic and Physical Parameters

Laboratory and Field Chemistry

The results for Laboratory and Field Chemistry scans were below any applicable health related ODWOs.

There are ODWOs that are set for parameters which are related to the aesthetic quality rather than health.

The aesthetic ODWO of 5 True Colour Units (TCU) was exceeded in the February Site 2 free flow water (10 TCU) and the March Site 2 free flow water (5.5 TCU). Colour in drinking water may be due to the presence of natural and synthetic organic substances as well as certain metallic ions.

The ODWO indicate that a hardness level of between 80 and 100 mg/L as calcium carbonate for domestic waters provides an acceptable balance between corrosion and incrustation. Water supplies with a hardness greater than 200 mg/L are considered poor (Table X), and would possess a tendency to form scale deposits and result in

excessive soap consumption. Hardness levels for the Fort Erie (Rosehill) water ranged from 117 to 138 mg/L as Calcium Carbonate.

The Langelier Index is used extensively in estimating the corrosion potential of water. An increasingly negative index indicates the increasing possibility of corrosion. It is considered sound engineering practice to maintain a slightly positive Langelier Index. The Langelier Index for Fort Erie (Rosehill) is consistently positive.

It is desirable that the Temperature of drinking water be less than 15°C; the palatability of water is enhanced by its coolness. A temperature below 15°C will tend to reduce the growth of nuisance organisms and hence minimize associated taste, colour, odour and corrosion problems. The temperature of the delivered water may increase in the distribution system due to the warming effect of the soil in late summer and fall and/or as a result of higher temperatures in the source water. The desired ODWO was exceeded nine times in the treated water and free flow distributed water.

Metals

The results reported for the Metal scan were below any applicable ODWOs.

Iron and Manganese levels were lower in the treated water as compared to the raw water. This is a result of the treatment

process. The addition of Alum as a coagulant to the raw water and the resulting coagulation/settling process has been shown to reduce the levels of most metals.

Elevated levels of Copper, Lead and Zinc were detected in the standing samples from the distribution system as compared to the free flow samples thus, indicating that these metals were leached from the household plumbing as the water stood overnight. Although the Langelier Index indicates minimal potential for corrosion some metals will be leached in standing samples in most supplies.

The levels of Iron in the Site 2 samples were much higher than those for the treated water at the plant as were both Iron and Manganese values for the Site 1 samples. These elevated levels may be due in part to cast iron distribution mains.

At present, there is no evidence that Aluminum is physiologically harmful and no health limit for drinking water has been specified. The measure of residual Aluminum in the treated water is important to indicate the efficiency of the treatment process. The ODWOs indicate that a useful guideline is to maintain a residual below 100 ug/L as Al in the water leaving the plant to avoid problems in the distribution system. Aluminum values exceeded the ODWO operational guideline eight times in the treated water.

Organic Parameters

Chloroaromatics

Results of the Chloroaromatics scan showed that no Chloroaromatics were detected.

Chlorophenols

Results of the Chlorophenol scan showed that no Chlorophenols were detected.

Pesticides and PCB (Polychlorinated Biphenyl)

Results of the Pesticide and PCB scan showed that no PCBs were detected and that two pesticides were detected:

Alpha BHC

Lindane

There are several isomers of BHC (Benzene Hexachloride); gamma BHC is the active ingredient of the pesticide Lindane while alpha BHC is the isomer predominantly found in the Great Lakes basin as indicated in results from other water supplies on DWSP.

Alpha BHC was detected at trace levels, six times in the raw water, nine times in the treated water, three times in the Site 1 water and in the Site 2 water.

Lindane was detected at trace levels, once in both the raw water

and treated water.

Specific Pesticides

Results of the Specific Pesticide scan showed that no Specific Pesticides were detected.

Phenolics

The maximum desirable concentration of phenolic substances in drinking water is 2.0 ug/L. This limit has been set primarily to prevent the occurrence of undesirable tastes and odours, particularly in chlorinated water. Phenolics were detected in the raw water ranging from 1.2 ug/L to 2.6 ug/L and in the treated water ranging from 1.2 ug/L to 2.0 ug/L. Phenolics were also detected at trace levels, four times in the raw water and five times in the treated water. Phenolic compounds are present in the aquatic environment as a result of natural and/or industrial processes.

Polynuclear Aromatic Hydrocarbons (PAH)

Results of the PAH scan showed that no PAHs were detected.

Volatiles

Results of the Volatile scan showed that six parameters, other than Trihalomethanes (THMs), were detected:

Benzene

Toluene

Ethylbenzene

Styrene

Carbon Tetrachloride

Tetrachloroethylene

Benzene was detected at a trace level, once in the treated water.

Toluene was detected at trace levels, three times in the treated water, twice in the Site 1 water and once in the Site 2 water. The detection of toluene at low, trace levels is a laboratory artifact derived from the analytical methodology. The purge-and-trap analytical technique depends on the purging of the volatile organics in the water sample with helium gas onto a Tenax trapping column. The volatile materials are subsequently thermally desorbed, separated and quantified. Tenax, a toluene-like polymeric material, tends to decompose sporadically upon heating into toluene and other aromatic components (ethylbenzene and xylene) giving instrument blanks in the order of 0.05 ug/L.

The detected trace levels of Styrene are also considered to be laboratory artifacts due to the outgassing of monomeric styrene from the polystyrene shipping containers. The sporadic background levels from this source are in the order of 0.05 ug/L.

Styrene was detected at positive levels in the October raw water sample at 0.60 ug/L and in the corresponding treated water sample

at 0.90 ug/L. These levels are below the United States Environmental Protection Agency's proposed Maximum Contaminant Levels (MCL) for Styrene in drinking water of 140 ug/L.

Ethylbenzene was detected at a trace level, once in the raw water, twice in the treated water and twice in the Site 2 water.

The volatiles listed above are typically found on an occasional basis at other water supplies included on the DWSP usually at trace levels.

Carbon Tetrachloride was detected at a trace level, once in the Site 2 water.

Tetrachloroethylene (T-Chloroethylene) was detected at a trace level, once in the Site 2 water.

THMs are known to be produced during the water treatment process and will always occur in chlorinated surface waters. THMs are comprised of Chloroform, Chlorodibromomethane and Dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as well as for total THMs.

Chloroform, Chlorodibromomethane, Dichlorobromomethane and Total THMs were detected in all treated waters. Bromoform was detected at trace levels, in most samples of treated water. All Total THM

occurrences, ranging from 21.6 ug/L to 56.6 ug/L were well below the ODWO of 350 ug/L.

CONCLUSIONS

The Fort Erie (Rosehill) water treatment plant for the sample year of 1988 produced good quality water at the plant and this was maintained in the distribution system.

No health related guidelines, for organic or inorganic parameters, were exceeded during 1987 and 1988.

RECOMMENDATIONS

Two recommendations can be made:

- 1) Consideration should be given to reducing the sampling frequency at this location.
- 2) The reason for elevated Aluminum levels in treated water samples should be investigated.

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE (ROSENHILL WTP) SAMPLE DAY CONDITIONS FOR 1988

SAMPLE DAY CONDITIONS			TREATMENT CHEMICAL DOSAGES (MG/L)			
DATE	RETENTION TIME (HRS)	FLOW (1000MG3)	PRE-CHLORINATION	COAGULATION	POST-CHLORINATION	TASTE & ODOR
			CHLORINE	ALUM LIQUID	CHLORINE	ACTIVATED CARBON POWDER
JAN 26	24.0	14.3	.75	5.00	.30	.
FEB 23	.	13.0	.80	5.00	.30	.
MAR 22	.2	13.0	.75	4.50	.35	.
APR 19	24.0	14.0	.75	4.50	.40	.
MAY 17	1.0	14.0	1.00	2.50	.45	.
JUN 14	.5	30.0	1.00	4.00	.45	.
JUL 12	.5	29.0	1.40	5.00	.45	1.50
AUG 09	.2	24.0	1.90	5.50	.45	1.00
SEP 07	2.3	14.0	1.70	6.00	.50	1.00
OCT 03	.3	14.0	1.40	4.00	.38	.
NOV 01	.6	14.0	1.20	5.00	.30	.
DEC 06	.7	12.0	1.10	6.00	.35	.

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1988)

SCAM	PARAMETER	RAW			TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
BACTERIOLOGICAL	AEROMONAS SP	.	.	.	.	.	.	2	1	0	1	0	0
	E. COLI P/A	.	.	.	.	.	.	2	0	0	1	0	0
	FECAL COLIFORM MF	10	5	0	.	.	.	.	.	.	.	.	.
	FECAL COLIFORM	.	.	.	.	.	.	.	.	.	.	.	.
	STANDARD PLATE CNT MF	6	6	0	10	6	0	11	7	0	8	7	0
	P/A BOTTLE	.	.	.	8	0	0	8	2	0	6	1	0
	STAPH AUREUS	.	.	.	.	.	.	2	0	0	1	0	0
	COLIFORM	.	.	.	.	.	.	2	1	0	1	0	0
	TOTAL COLIFORM MF	10	10	0	12	0	0	11	2	0	8	1	0
	T COLIFORM BCKGRD MF	10	10	0	12	1	0	11	6	0	8	3	0
*TOTAL SCAM BACTERIOLOGICAL													
*TOTAL GROUP BACTERIOLOGICAL													
36 31 0 42 7 0 51 19 0 35 12 0													
36 31 0 42 7 0 51 19 0 35 12 0													
CHEMISTRY (FLD)	FLD CHLORINE (COMB)	.	.	.	11	0	11	11	0	2	2	0	0
	FLD CHLORINE FREE	1	0	0	11	11	0	22	0	7	7	0	0
	FLD CHLORINE (TOTAL)	.	.	.	11	11	0	22	0	8	8	0	0
	FLD PH	10	10	0	11	11	0	22	0	16	16	0	0
	FLD TEMPERATURE	10	10	0	11	11	0	22	0	16	16	0	0
	FLD TURBIDITY	10	10	0	11	11	0	22	0	16	16	0	0
*TOTAL SCAM CHEMISTRY (FLD)													
31 30 0 66 66 0 99 99 0 55 55 0													
CHEMISTRY (LAB)	ALKALINITY	10	10	0	12	12	0	22	22	0	16	16	0

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE		RAW		TREATED		SITE 1		SITE 2		
		TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	
CHEMISTRY (LAB)	CALCIUM	10	10	0	12	12	0	22	22	0	15	0
	CYANIDE	10	0	0	12	0	0	11	0	0	8	0
	CHLORIDE	10	10	0	12	12	0	22	22	0	16	0
	COLOUR	10	2	8	12	0	12	22	6	16	16	0
	CONDUCTIVITY	10	10	0	12	12	0	22	22	0	16	0
	FLUORIDE	10	10	0	12	12	0	22	22	0	15	0
	HARDNESS	10	10	0	12	12	0	22	22	0	15	0
	IONCAL	10	6	0	12	6	0	22	10	0	16	0
	LANGELIERS INDEX	10	10	0	12	12	0	22	22	0	15	0
	MAGNESIUM	10	10	0	12	12	0	22	22	0	15	0
	SODIUM	10	10	0	12	12	0	22	22	0	15	0
	AMMONIUM TOTAL	10	10	0	12	7	5	22	17	5	16	2
	NITRITE	10	6	4	12	4	7	22	9	13	16	4
	TOTAL NITRATES	10	7	3	12	9	3	22	20	2	16	0
	NITROGEN TOT KJELD	10	10	0	12	12	0	22	22	0	16	0
	PH	10	10	0	12	12	0	22	22	0	16	0
	PHOSPHORUS FIL REACT	10	4	5	12	0	10	0	0	0	0	0
PHOSPHORUS TOTAL	10	7	2	12	1	9	0	0	0	0	0	
SULPHATE	6	6	0	6	6	0	10	10	0	6	0	
TURBIDITY	10	10	0	12	10	2	22	22	0	15	0	
*TOTAL SCAN CHEMISTRY (LAB)		206	168	22	246	175	48	395	336	36	279	14
METALS	SILVER	9	0	1	12	0	5	22	0	10	16	3

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1968)

SCAN	PARAMETER	SITE		BAU		TREATED		SITE 1		SITE 2	
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL
CHLOROMONATICS											
	HEXACHLOROCYCLOPENTADIENE	10	0	0	12	0	0	7	0	0	7
	123 TRICHLOROBENZENE	10	0	0	12	0	0	7	0	0	7
	1234 T-CHLOROBENZENE	10	0	0	12	0	0	7	0	0	7
	1235 T-CHLOROBENZENE	10	0	0	12	0	0	7	0	0	7
	124 TRICHLOROBENZENE	10	0	0	12	0	0	7	0	0	7
	1245 T-CHLOROBENZENE	10	0	0	12	0	0	7	0	0	7
	135 TRICHLOROBENZENE	10	0	0	12	0	0	7	0	0	7
	HEXACHLOROCYCLOPENTADIENE	10	0	0	12	0	0	7	0	0	7
	HEXACHLOROETHANE	10	0	0	12	0	0	7	0	0	7
	OCTACHLOROCYCLOPENTADIENE	10	0	0	12	0	0	7	0	0	7
	PENTACHLOROBENZENE	10	0	0	12	0	0	7	0	0	7
	234 TRICHLOROTOLUENE	10	0	0	12	0	0	7	0	0	7
	245 TRICHLOROTOLUENE	10	0	0	12	0	0	7	0	0	7
	266 TRICHLOROTOLUENE	10	0	0	12	0	0	7	0	0	7
*TOTAL SCAN CHLOROMONATICS		140	0	0	168	0	0	98	0	0	98
CHLOROPHENOLS											
	234 TRICHLOROPHENOL	2	0	0	2	0	0	0	0	0	0
	2345 T-CHLOROPHENOL	2	0	0	2	0	0	0	0	0	0
	2356 T-CHLOROPHENOL	2	0	0	2	0	0	0	0	0	0
	245-TRICHLOROPHENOL	2	0	0	2	0	0	0	0	0	0
	246-TRICHLOROPHENOL	2	0	0	2	0	0	0	0	0	0
	PENTACHLOROPHENOL	2	0	0	2	0	0	0	0	0	0
*TOTAL SCAN CHLOROPHENOLS		12	0	0	12	0	0	0	0	0	0

DRINKING WATER SURVEILLANCE PROGRAM FOR ERIE

SUMMARY TABLE OF RESULTS (1960)

SCAN	PARAMETER	SITE		RAM		TREATED		SITE 1		SITE 2	
		TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE
PAB	PHENANTHRENE	9	0	0	0	10	0				
	ANTHRACENE	9	0	0	0	10	0				
	FLUORANTHENE	9	0	0	0	10	0				
	PYRENE	9	0	0	0	10	0				
	BENZO(A)ANTHRACENE	9	0	0	0	10	0				
	CHRYSENE	9	0	0	0	10	0				
	DIMETH. BENZ(A)ANTHR	9	0	0	0	10	0				
	BENZO(E) PYRENE	9	0	0	0	10	0				
	BENZO(J) FLUORANTHENE	0	0	0	0	0	0				
	BENZO(B) FLUORANTHENE	9	0	0	0	10	0				
	PERYLENE	9	0	0	0	10	0				
	BENZO(K) FLUORANTHENE	9	0	0	0	10	0				
	BENZO(A) PYRENE	9	0	0	0	10	0				
	BENZO(G,H,I) PERYLENE	9	0	0	0	10	0				
	DIBENZO(A,H) ANTHRAC	9	0	0	0	10	0				
	INDENO(1,2,3-C,D) PY	9	0	0	0	10	0				
	BENZO(B) CHRYSENE	9	0	0	0	10	0				
	ANTHRANTHRENE	0	0	0	0	0	0				
	CORONENE	9	0	0	0	10	0				
TOTAL SCAN PAH		153	0	0	0	170	0	0	0	0	0
PESTICIDES & PCB	ALDRIN	10	0	0	0	12	0	0	7	0	0
	ALPHA BHC	10	0	6	12	0	9	7	0	3	7

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1968)

SCAM	PARAMETER	SITE		RAW		TREATED		SITE 1		SITE 2	
		TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE
PESTICIDES & PCB	BETA BHC	10	0	0	12	0	0	7	0	7	0
	LINDANE	10	0	1	12	0	1	7	0	7	0
	ALPHA CHLORDANE	10	0	0	12	0	0	7	0	7	0
	GAMMA CHLORDANE	10	0	0	12	0	0	7	0	7	0
	DIELDRIN	10	0	0	12	0	0	7	0	7	0
	METHOXYCHLOR	10	0	0	12	0	0	7	0	7	0
	ENDOSULFAM I	10	0	0	12	0	0	7	0	7	0
	ENDOSULFAM II	10	0	0	12	0	0	7	0	7	0
	ENDRIN	10	0	0	12	0	0	7	0	7	0
	ENDOSULFAM SULPHATE	10	0	0	12	0	0	7	0	7	0
	HEPTACHLOR EPOXIDE	10	0	0	12	0	0	7	0	7	0
	HEPTACHLOR	10	0	0	12	0	0	7	0	7	0
	HEXACHLOR	10	0	0	12	0	0	7	0	7	0
	HEXACHLOR	10	0	0	12	0	0	7	0	7	0
	OPDST	10	0	0	12	0	0	7	0	7	0
	PCB	10	0	0	12	0	0	7	0	7	0
	DDO	10	0	0	12	0	0	7	0	7	0
	PPDST	10	0	0	12	0	0	7	0	7	0
	AMETRINE	10	0	0	12	0	0	11	0	11	0
	ATRAZINE	10	0	0	12	0	0	11	0	11	0
	ATRAZONE	10	0	0	12	0	0	11	0	11	0
	CYAMAZINE	10	0	0	12	0	0	11	0	11	0
	DES ETNYL ATRAZINE	6	0	0	6	0	0	5	0	3	0
	DES ETNYL SIMAZINE	6	0	0	6	0	0	5	0	3	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1968)

SCAM	PARAMETER	SITE		RAW		TREATED		SITE 1		SITE 2	
		TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE
PESTICIDES & PCB	PROMETONE	10	0	0	12	0	0	11	0	0	0
	PROPACINE	10	0	0	12	0	0	11	0	0	0
	PROMETRYNE	10	0	0	12	0	0	11	0	0	0
	METRIBUZIN	10	0	0	12	0	0	11	0	0	0
	SIMAZINE	10	0	0	12	0	0	11	0	0	0
	ALACHLOR	10	0	0	12	0	0	11	0	0	0
	METOLACHLOR	10	0	0	12	0	0	11	0	0	0
*TOTAL SCAM PESTICIDES & PCB		332	0	7	396	0	10	278	0	3	241
PHENOLICS	PHENOLICS	10	4	4	12	4	5	.	.	.	.
	*TOTAL SCAM PHENOLICS	10	4	4	12	4	5	0	0	0	0
SPECIFIC PESTICIDES	TOLUENE	0	0	0	0	0	0	0	0	0	0
	2,4,5-T	2	0	0	2	0	0	.	.	.	.
	2,4-D	2	0	0	2	0	0	.	.	.	.
	2,4-D8	2	0	0	2	0	0	.	.	.	.
	2,4 D PROPIONIC ACID	2	0	0	2	0	0	.	.	.	.
	DICAMBA	2	0	0	2	0	0	.	.	.	.
	PICHLORAM	0	0	0	0	0	0	.	.	.	.
	SILVEX	2	0	0	2	0	0	.	.	.	.
	DIAZINON	2	0	0	2	0	0	.	.	.	.
								.	.	.	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1988)

SCAN	PARAMETER	SITE		TREATED		SITE 1		SITE 2	
		TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE
SPECIFIC PESTICIDES									
	DICHLOROVOS	2	0	2	0	0	0	0	0
	CHLORPYRIFOS	2	0	2	0	0	0	0	0
	ETHION	2	0	2	0	0	0	0	0
	AZINPHOS-METHYL	0	0	0	0	0	0	0	0
	MALATHION	2	0	2	0	0	0	0	0
	NEVINPHOS	2	0	2	0	0	0	0	0
	METHYL PARATHION	2	0	2	0	0	0	0	0
	METHYLTRITHION	2	0	2	0	0	0	0	0
	PARATHION	2	0	2	0	0	0	0	0
	PHORATE	2	0	2	0	0	0	0	0
	RELDAN	2	0	2	0	0	0	0	0
	ROWEL	2	0	2	0	0	0	0	0
	ANTHOCARB	0	0	0	0	0	0	0	0
	BENOMYL	2	0	2	0	0	0	0	0
	BUX	2	0	2	0	0	0	0	0
	CARBOFURAN	2	0	2	0	0	0	0	0
	CICP	2	0	2	0	0	0	0	0
	DIALATE	2	0	2	0	0	0	0	0
	EPTAM	2	0	2	0	0	0	0	0
	IPC	2	0	2	0	0	0	0	0
	PROPOUR	2	0	2	0	0	0	0	0
	CARBARYL	2	0	2	0	0	0	0	0
	BUTYLATE	2	0	2	0	0	0	0	0
TOTAL SCAN SPECIFIC PESTICIDES		56	0	0	56	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1985)

SCAN	PARAMETER	SITE			TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES	BENZENE	10	0	0	10	0	1	8	0	0	6	0	0
	TOLUENE	10	0	0	10	1	2	8	1	1	6	0	1
	ETHYLBENZENE	10	0	1	10	0	2	8	0	0	6	0	2
	P-XYLENE	10	0	0	10	0	0	8	0	0	6	0	0
	M-XYLENE	10	0	0	10	0	0	8	0	0	6	0	0
	O-XYLENE	10	0	0	10	0	0	8	0	0	6	0	0
	STYRENE	3	1	2	3	1	2	2	2	2	2	0	2
	1,1 DICHLOROETHYLENE	10	0	0	10	0	0	8	0	0	6	0	0
	METHYLENE CHLORIDE	10	0	0	10	0	0	8	0	0	6	0	0
	1,1,2,2 DICHLOROETHYLENE	10	0	0	10	0	0	8	0	0	6	0	0
	1,1 DICHLOROETHANE	10	0	0	10	0	0	8	0	0	6	0	0
	CHLOROFORM	10	1	1	10	10	0	8	8	0	6	6	0
	1,1,1 TRICHLOROETHANE	10	0	0	10	0	0	8	0	0	6	0	0
	1,2 DICHLOROETHANE	10	0	0	10	0	0	8	0	0	6	0	0
	CARBON TETRACHLORIDE	10	0	0	10	0	0	8	0	0	6	0	1
	1,2 DICHLOROPROPANE	10	0	0	10	0	0	8	0	0	6	0	0
	TRICHLOROETHYLENE	10	0	0	10	0	0	8	0	0	6	0	0
	DICHLOROBROMOETHANE	10	1	1	10	10	0	8	8	0	6	6	0
	1,1,2 TRICHLOROETHANE	10	0	0	10	0	0	8	0	0	6	0	0
	CHLORODIBROMOETHANE	10	0	1	10	10	0	8	8	0	6	0	0
	T-CHLOROETHYLENE	10	0	0	10	0	0	7	0	0	6	0	1
	BROMOFORM	10	0	0	10	0	9	8	0	8	6	0	5
	1,1,2,2 T-CHLOROETHANE	10	0	0	10	0	0	8	0	0	6	0	0
	CHLOROBENZENE	10	0	0	10	0	0	8	0	0	6	0	0
	1,4 DICHLOROBENZENE	10	0	0	10	0	0	8	0	0	6	0	0

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE

SUMMARY TABLE OF RESULTS (1968)

SCAN	PARAMETER	SITE		RAW		TREATED		SITE 1		SITE 2			
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES													
	1,3 DICHLOROBENZENE	10	0	0	10	0	0	8	0	0	6	0	0
	1,2 DICHLOROBENZENE	10	0	0	10	0	0	8	0	0	6	0	0
	TRIFLUOROCHLOROTOLUENE	4	0	0	4	0	0	3	0	0	3	0	0
	ETHYLENE DIBROMIDE	10	0	0	10	0	0	8	0	0	6	0	0
	TOTAL TRINALOXYMETHANES	10	0	2	10	10	0	8	8	0	6	6	0
	*TOTAL SCAN VOLATILES	287	3	8	287	42	16	228	33	11	173	24	12
	*TOTAL GROUP ORGANIC	990	7	19	1101	46	31	604	33	14	512	24	15

KEY TO TABLE 5 and 6

- A** **ONTARIO DRINKING WATER OBJECTIVES (ODWO)**
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
1*. MAC for Bacteriological Analyses
 Poor water quality is indicated when :
 - total coliform counts $> 0 < 5$
 - P/A Bottle Test is present after 48 hours
 - Aeromonas organisms are detected in more than 25% of samples in a single submission or in successive submissions from the same sampling site
 - Pseudomonas Aeruginosa, Staphylococcus Aureus and members of the Fecal Streptococcus group should not be detected in any sample
 - Standard Plate Count should not exceed 500 organisms per ml at 35 °C within 48 hours
2. Interim Maximum Acceptable Concentration (IMAC)
3. Maximum Desirable Concentration (MDC)
4. Aesthetic or Recommended Operational Guideline
 - hardness levels between 80 and 100 mg/L as calcium carbonate are considered to provide an acceptable balance between corrosion and incrustation, water supplies with a hardness > 200 mg/L are considered poor and those in excess of 500 mg/L are unacceptable.
- B** **HEALTH & WELFARE CANADA (H&W)**
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO) (for xylenes, the AO is a total)
- C** **WORLD HEALTH ORGANIZATION (WHO)**
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV
- D** **US ENVIRONMENTAL PROTECTION AGENCY (EPA)**
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria
- F** **EUROPEAN ECONOMIC COMMUNITY (EEC)**
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissible Concentration (MADC)
- G** **CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE**
- H** **USSR MAXIMUM PERMISSIBLE CONCENTRATION**
- I** **NEW YORK STATE AMBIENT WATER GUIDELINE**
- N/A** **NONE AVAILABLE**

LABORATORY RESULTS, REMARK DESCRIPTIONS

.	No Sample Taken
BDL	Below Minimum Measurable Amount
<T	Greater Than Detection Limit But Not Confident
>	Results Are Greater Than The Upper Limit
<=>	Approximate Result
!AW	No Data: Analysis Withdrawn
!CR	No Data: Could Not Confirm By Reanalysis
!CS	No Data: Contamination Suspected
!IL	No Data: Sample Incorrectly Labelled
!IS	No Data: Insufficient Sample
!LA	No Data: Laboratory Accident
!LD	No Data: Test Queued After Sample Discarded
!NA	No Data: No Authorization To Perform Reanalysis
!NP	No Data: No Procedure
!NR	No Data: Sample Not Received
!OP	No Data: Obscured Plate
!QU	No Data: Quality Control Unacceptable
!PE	No Data: Procedural Error - Sample Discarded
!PH	No Data: Sample pH Outside Valid Range
!RO	No Data: See Attached Report (no numeric results)
!SM	No Data: Sample Missing
!SS	No Data: Send Separate Sample Properly Preserved
!UI	No Data: Indeterminant Interference
!TX	No Data: Time Expired
A3C	Approximate, Total Count Exceeded 300 Colonies
APL	Additional Peak, Large, Not Priority Pollutant
APS	Additional Peak, Less Than, Not Priority Pollutant
CIC	Possible Contamination, Improper Cap
CRO	Calculated Result Only

PPS	Test Performed On Preserved Sample
RMP	P and M-Xylene Not Separated
RRV	Rerun Verification
RVU	Reported Value Unusual
SPS	Several Peaks, Small, Not Priority Pollutant
UAL	Unreliable: Sample Age Exceeds Normal Limit
UCR	Unreliable: Could Not Confirm By Reanalysis
UCS	Unreliable: Contamination Suspected
UIN	Unreliable: Indeterminant Interference
XP	Positive After X Number of Hours
T# (T06)	Result Taken After # Hours

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM FORT ERIE (ROSEHILL WTP) 1988

WATER TREATMENT PLANT			DISTRIBUTION SYSTEM		
RAW	TREATED	SITE 1	SITE 2	STANDING	FREE FLOW
BACTERIOLOGICAL					
AEROMONAS SP (0=ABSENT)		DET'N LIMIT = N/A		GUIDELINE = 0 (A1)	
MAR	.	.	.	.	0
JUL	.	.	1	.	.
AUG	.	.	0	.	.
E. COLI P/A (0=ABSENT)					
		DET'N LIMIT = N/A		GUIDELINE = N/A	
MAR	.	.	.	.	0
JUL	.	.	0	.	.
AUG	.	.	0	.	.
FECAL COLIFORM MF (CT/100ML)					
		DET'N LIMIT = 0		GUIDELINE = 0 (A1)	
MAR	0	.	.	.	.
APR	0	.	.	.	.
MAY	0	.	.	.	.
JUN	0	.	.	.	.
JUL	2	.	.	.	.
AUG	0	.	.	.	.
SEP	4	.	.	.	.
OCT	2 T48	.	.	.	.
NOV	1 T24	.	.	.	.
DEC	50 T48	.	.	.	.
FECAL COLIFORM (0=ABSENT)					
		DET'N LIMIT = N/A		GUIDELINE = 0 (A1)	
MAR	.	.	.	.	0
JUL	.	.	0	.	.
AUG	.	.	0	.	.

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
		DET'N LIMIT = 0		GUIDELINE = 500/ML (A1)	
STANDARD PLATE CNT MP (CT/ML)					
JAN	.	.	0	.	0
FEB	.	.	4	.	62
MAR	1	.	16	.	2
APR	68	.	0	.	2
MAY	32	.	71	.	.
JUN	560	.	1	.	11
JUL	5200	.	1LA	.	.
AUG	740	.	6	.	800
SEP	.	.	3	.	.
OCT	.	.	1 <=>	.	.
NOV	.	.	1 <=>	.	187 T24
DEC	.	.	1LA	.	42 T24

P/A BOTTLE (0=ABSENT)		DET'N LIMIT = 0		GUIDELINE = 0 (A1*)	
JAN	.	.	0	.	0
FEB	.	.	0	.	0
MAR	.	.	0	.	1
APR	.	.	0	.	0
MAY	.	.	0	.	.
JUN	.	.	0	.	0
JUL	.	.	1	.	.
AUG	.	.	1	.	0

STAPH AUREUS (0=ABSENT)		DET'N LIMIT = N/A		GUIDELINE = 0 (A1)	
MAR	.	.	.	.	0
JUL	.	.	0	.	.
AUG	.	.	0	.	.

COLIFORM (0=ABSENT)		DET'N LIMIT = N/A		GUIDELINE = 0 (A1)	
MAR	.	.	.	.	0
JUL	.	.	0	.	.
AUG	.	.	1	.	.

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1	SITE 2
		STANDING	STANDING
		FREE FLOW	FREE FLOW

TOTAL COLIFORM MF (CT/100ML)

DET'N LIMIT = 0

GUIDELINE = 5/100ML(A1)

JAN	.	0	.	0	.	0
FEB	.	0	.	0	.	0
MAR	8	0	.	0	.	0
APR	26	0	.	0	.	0
MAY	18	0	.	0	.	0
JUN	126 A3C	0	.	0	.	0
JUL	120	0	.	1	.	0
AUG	300	0	.	2	.	40 A3C
SEP	50	0	.	0	.	.
OCT	8 A3C	0 T48	.	0 T24	.	.
NOV	38 A3C	0 T24	.	0 T24	.	0 T24
DEC	480 A3C	BDL	.	.	.	0 T24

T COLIFORM BCKGRD MF (CT/100ML)

DET'N LIMIT = 0

GUIDELINE = N/A

JAN	.	0	.	0	.	0
FEB	.	0	.	0	.	0
MAR	114	0	.	0	.	0
APR	156	0	.	0	.	0
MAY	202	0	.	0	.	0
JUN	2200	0	.	0	.	0
JUL	10900	0	.	14	.	0
AUG	10400	0	.	114	.	.
SEP	28000	0	.	204	.	26000
OCT	4800 >	1 T48	.	22	.	.
NOV	4800 A3C	0 T24	.	2 T24	.	220 T24
DEC	7000 A3C	BDL	.	2 T24	.	100 T24

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1	SITE 2
		STANDING	STANDING
		FREE FLOW	FREE FLOW

CHEMISTRY (FLD) FLD CHLORINE (COMB) (MG/L)

DET'M LIMIT = N/A

GUIDELINE = N/A

JAN	.	.200	.200	.	.
FEB	.	.200	.	.	.
MAR	.070	.	.200	.	.
APR	.090	.	.	.100	.
MAY	.040	.	.	.	.
JUN	.250	.200	.200	.	.
JUL	.070	.200	.	.	.
AUG	.100	.	.200	.	.
SEP	.050	.200	.	.	.
OCT	.100	.	.200	.	.100
NOV	.080	.	.	.	.
DEC	.200	.200	.	.	.
	.110	.	.	.	.

FLD CHLORINE FREE (MG/L)

DET'M LIMIT = N/A

GUIDELINE = N/A

JAN	.	.100	.100	.	.100
FEB	.410	.100	.300	.	.150
MAR	.480	.300	.300	.	.
APR	.310	.300	.100	.	.100
MAY	.350	.100	.100	.	.
JUN	.350	.100	.100	.	.100
JUL	.340	.100	.100	.	.
AUG	.400	.100	.100	.	.150
SEP	.350	.300	.100	.	.
OCT	.000	.300	.300	.	.
NOV	.270	.300	.100	.	.100
DEC	.400	.300	.	.	.150
	.320	.	.	.	.

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
FLD CHLORINE (TOTAL) (MG/L)					
		DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	.300	.300	.	.100
FEB	.	.300	.300	.	.150
MAR	.480	.300	.500	.100	.150
APR	.570	.300	.100	.	.100
MAY	.350	.300	.300	.	.
JUN	.600	.300	.100	.	.
JUL	.420	.300	.300	.	.250
AUG	.440	.100	.100	.	.
SEP	.450	.300	.300	.	.
OCT	.450	.300	.300	.	.
NOV	.350	.300	.300	.	.100
DEC	.600	.300	.300	.	.150
	.430	.	.	.	.

FLD PH (DMSHLESS)	DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
	STANDING	FREE FLOW	STANDING	FREE FLOW
JAN	.	7.800	7.400	7.300
FEB	7.600	7.800	7.800	7.600
MAR	8.200	7.600	7.600	7.800
APR	7.900	7.800	7.600	7.600
MAY	8.000	7.600	.	.
JUN	7.800	7.800	7.800	7.650
JUL	8.000	7.600	.	.
AUG	8.000	7.600	7.600	7.800
SEP	7.800	7.500	.	.
OCT	7.800	7.500	.	.
NOV	7.800	7.600	7.600	7.500
DEC	7.800	7.600	7.600	7.900

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW

FLD TEMPERATURE (DEG.C)					
JAN	.	12.000	4.000	3.000	4.000
FEB	.800	11.500	3.000	10.000	3.000
MAR	1.000	9.000	4.900	4.000	3.000
APR	2.000	12.000	8.000	10.000	8.000
MAY	10.000	11.000	11.000	.	.
JUN	15.000	16.000	14.500	12.500	14.000
JUL	23.000	19.500	18.000	.	.
AUG	25.000	21.000	21.000	22.000	22.000
SEP	20.000	20.000	19.000	.	.
OCT	18.300	19.000	18.000	.	.
NOV	9.900	15.500	14.500	14.000	12.000
DEC	6.600	.	.	11.000	9.000

FLD TURBIDITY (FTU)					
JAN	.	DET'N LIMIT = N/A	GUIDELINE = 1.0 (A1)	.	.
FEB	.410	.	.	.200	.210
MAR	.250	.	.	.	.250
APR	.290	.	.	.210	.200
MAY	.290	.	.	.	.380
JUN	.250	.	.	.	.
JUL	.630	.	.	.	.
AUG	.310	.	.	.	.
SEP	.160	.	.	.	.
OCT	.220	.	.	.	.
NOV	.200	.	.	.	.
DEC	.180	.	.	.	.

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW		TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
CHEMISTRY (LAB)						
ALKALINITY (MG/L)						
DET'N LIMIT = .200						
GUIDELINE = 30-500 (A4)						
JAN	.	100.600	100.100	100.900	100.300	98.700
FEB	.	102.800	104.300	104.300	106.800	105.000
MAR	104.100	100.200	99.700	100.400	101.400	100.100
APR	99.500	94.800	95.900	96.500	95.700	97.600
MAY	99.700	97.900	98.800	99.000	.	.
JUN	103.500	99.300	99.700	99.600	99.700	100.200
JUL	100.100	89.500	91.300	92.200	.	.
AUG	100.400	96.200	98.800	96.500	98.400	98.700
SEP	98.200	94.200	93.600	94.400	.	.
OCT	102.000	98.800	99.400	99.600	.	.
NOV	103.100	100.900	101.300	101.800	102.300	103.400
DEC	110.000	104.000	.	.	104.300	103.600
CALCIUM (MG/L)						
DET'N LIMIT = .100						
GUIDELINE = 100 (F2)						
JAN	.	37.400	37.000	37.600	38.000	36.800
FEB	.	38.800	40.200	39.000	39.600	40.600
MAR	40.200	40.400	39.000	39.400	39.200	36.400
APR	32.400	34.000	34.000	34.600	35.400	34.400
MAY	36.600	36.800	36.200	37.000	.	.
JUN	36.400	37.000	37.200	37.600	37.400	115
JUL	37.000	39.000	38.600	38.200	.	.
AUG	35.800	36.700	37.400	36.200	36.800	37.100
SEP	36.200	37.800	37.800	38.400	.	.
OCT	37.600	37.400	38.400	39.200	.	.
NOV	37.400	36.200	36.200	37.000	36.800	36.600
DEC	39.000	38.600	.	.	38.200	38.600

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
CHLORIDE (MG/L)					
		DET'N LIMIT = .200		GUIDELINE = 250 (A3)	
JAN	15.800	15.900	15.800	15.800	15.800
FEB	17.700	17.300	17.200	17.300	17.500
MAR	15.900	15.900	15.900	15.800	15.800
APR	14.900	15.100	15.000	15.000	14.900
MAY	14.300	16.900	16.700	.	.
JUN	15.700	16.300	16.600	16.200	16.200
JUL	15.200	16.200	17.400	.	.
AUG	15.600	16.900	16.800	16.400	16.600
SEP	14.200	16.900	16.800	.	.
OCT	15.000	16.600	16.500	.	.
NOV	15.000	16.700	16.600	16.300	16.200
DEC	14.700	.	.	16.000	16.100
	15.300	.	.	.	.
COLOUR (HEU)					
		DET'N LIMIT = .5		GUIDELINE = 5.0 (A3)	
JAN	.500 <T	1.500 <T	1.000 <T	4.500	4.500
FEB	1.000 <T	1.000 <T	1.000 <T	5.000	10.000
MAR	.500 <T	1.000 <T	1.000 <T	5.000	5.500
APR	.500 <T	2.500	2.000 <T	4.000	4.000
MAY	1.500 <T	3.000	3.000	.	.
JUN	1.000 <T	2.500	1.500 <T	4.000	3.000
JUL	.500 <T	1.500 <T	2.000 <T	.	.
AUG	.500 <T	1.500 <T	2.000 <T	3.000	3.000
SEP	.500 <T	2.000 <T	2.000 <T	.	.
OCT	.500 <T	2.000 <T	2.000 <T	.	.
NOV	1.000 <T	2.500	3.000	5.000	4.500
DEC	.500 <T	.	.	4.000	4.500

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW

CONDUCTIVITY (UMHO/CM)						
			DET'N LIMIT = 1		GUIDELINE = 400 (F2)	
JAN	.	302	304	302	304	298
FEB	.	312	316	314	322	313
MAR	294	295	297	295	296	292
APR	279	276	280	279	276	279
MAY	289	291	292	292	.	.
JUN	292	297	300	297	299	296
JUL	291	297	298	298	.	.
AUG	288	294	302	294	297	295
SEP	289	295	297	295	.	.
OCT	294	298	302	300	.	.
NOV	294	305	306	306	313	304
DEC	311	311	.	.	306	303

FLUORIDE (MG/L)						
			DET'N LIMIT = .01		GUIDELINE = 2.400 (A1)	
JAN	.	.100	.100	.120	.100	.100
FEB	.	.140	.140	.140	.120	.120
MAR	.140	.130	.110	.120	.110	.110
APR	.120	.090	.090	.090	.090	.090
MAY	.120	.110	.110	.110	.	.
JUN	.110	.110	.110	.110	.110	.115
JUL	.120	.120	.120	.110	.	.
AUG	.120	.120	.120	.120	.120	.120
SEP	.100	.100	.100	.120	.	.
OCT	.120	.120	.120	.120	.	.
NOV	.100	.100	.080	.080	.100	.100
DEC	.120	.120	.	.	.120	.120

DISTRIBUTION SYSTEM

RAW		TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
HARDNESS (MG/L)						
JAN		128.000	129.000	130.000	130.000	126.000
FEB		133.000	137.000	133.000	136.000	138.000
MAR	138.000	138.000	133.000	134.000	134.000	125.000
APR	121.000	117.000	117.000	118.000	120.000	117.000
MAY	125.000	125.000	123.000	124.000		
JUN	125.000	127.000	127.000	128.000	127.000	118
JUL	128.000	134.000	132.000	131.000		
AUG	113.000	126.600	127.900	125.300	126.000	126.300
SEP	125.000	130.000	129.000	130.000		
OCT	131.000	130.000	132.000	133.000		
NOV	129.000	126.000	125.000	127.000	126.000	126.000
DEC	138.000	136.000			133.000	133.000
IONCAL (UG/L)						
DET'N LIMIT = N/A						
JAN		.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
FEB		.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
MAR	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
APR	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
MAY	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
JUN	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
JUL	.747	7.991	5.148	3.503		
AUG	2.398	2.195	2.822	2.757	2.190	2.535
SEP	.463	1.557	2.105	2.637		
OCT	1.590	.785	.858	.185		
NOV	1.343	5.101	6.050	5.121	4.630	5.419
DEC	4.278	6.858			4.922	5.010

DISTRIBUTION SYSTEM

RAW		TREATED		SITE 1		SITE 2	
				STANDING	FREE FLOW	STANDING	FREE FLOW
LANGELIERS INDEX (UG/L)							
JAN	.	.136 NAF	.138 NAF	.139 NAF	.530 NAF	.102 NAF	
FEB	.	.168 NAF	.290 NAF	.277 NAF	.283 NAF	.277 NAF	
MAR	.445 NAF	.250 NAF	.212 NAF	.250 NAF	.312 NAF	.246 NAF	
APR	.308 NAF	.239 NAF	.262 NAF	.273 NAF	.300 NAF	.325 NAF	
MAY	.367 NAF	.271 NAF	.318 NAF	.408 NAF	.	.	
JUN	.430 NAF	.317 NAF	.290 NAF	.316 NAF	.343 NAF	.	
JUL	.463	.185	.289	.189	.	.	
AUG	.441	.321	.268	.277	.311	.	.347
SEP	.346	.204	.261	.242	.	.	
OCT	.477	.439	.442	.432	.	.	
NOV	.439	.332	.323	.355	.373	.477	
DEC	.490	.391	.	.	.409	.492	
MAGNESIUM (MG/L)							
				DET'N LIMIT = .050	GUIDELINE = 30 (F2)		
JAN	.	8.500	8.700	8.600	8.500	8.300	
FEB	.	8.700	8.900	8.600	8.900	9.000	
MAR	9.050	8.950	8.750	8.750	8.650	8.300	
APR	7.300	7.800	7.800	7.600	7.700	7.600	
MAY	8.100	8.100	7.800	7.800	.	.	
JUN	8.300	8.300	8.200	8.300	8.300	115	
JUL	8.600	8.800	8.600	8.700	.	.	
AUG	8.400	8.500	8.400	8.500	8.300	8.200	
SEP	8.400	8.600	8.400	8.300	.	.	
OCT	9.000	8.900	8.700	8.400	.	.	
NOV	8.500	8.700	8.400	8.300	8.400	8.400	
DEC	9.900	9.600	.	.	9.200	8.900	

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

		SITE 1		SITE 2	
RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
SODIUM (MG/L)		DET'N LIMIT = .200		GUIDELINE = 200 (C3)	
JAN	.	8.400	8.400	8.400	8.200
FEB	.	9.000	9.000	9.000	9.200
MAR	8.600	8.800	8.600	8.800	8.200
APR	7.600	7.800	8.000	7.600	7.800
MAY	8.400	8.200	8.400	.	.
JUN	8.800	8.800	8.600	8.800	118
JUL	8.800	8.800	8.800	.	.
AUG	8.200	8.400	8.400	8.600	8.400
SEP	8.400	8.600	8.800	.	.
OCT	9.600	8.800	8.800	.	.
NOV	8.600	9.200	9.200	9.000	9.000
DEC	9.000	.	.	8.800	8.600
AMMONIUM TOTAL (MG/L)		DET'N LIMIT = 0.002		GUIDELINE = .05 (F2)	
JAN	.	.306	.016	.882	.018
FEB	.	.138	.006 <T	.358	.006 <T
MAR	.020	.198	.036	.042	.028
APR	.012	.172	.008 <T	.206	.008 <T
MAY	.044	.138	.012	.	.
JUN	.028	.152	.008 <T	.352	.016
JUL	.030	.032	.004 <T	.	.
AUG	.046	.126	.020	.282	.018
SEP	.020	.144	.002 <T	.	.
OCT	.044	.144	.012	.	.
NOV	.016	.128	.012	1.110	.012
DEC	.018	.	.	.128	.012

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW		TREATED		SITE 1		SITE 2	
				STANDING		STANDING	
				FREE FLOW		FREE FLOW	
NITRITE (MG/L)				DET'N LIMIT = 0.001		GUIDELINE = 1.000 (A1)	
JAN	.	.002 <T	.002 <T	.002 <T	.002 <T	.002 <T	.002 <T
FEB	.	.001 <T	.001 <T	.001 <T	.001 <T	.001 <T	.001 <T
MAR	.005	.008	.023	.014	.008	.016	.016
APR	.003 <T	.001 <T	.002 <T	.001 <T	.001 <T	.001 <T	.001 <T
MAY	.030	.006	.008	.006	.001 <T	.	.
JUN	.005	.001 <T	.001 <T	.001 <T	.001 <T	.002 <T	.002 <T
JUL	.004 <T	.001 <T	.002 <T	.002 <T	.002 <T	.	.
AUG	.006	.003 <T	.011	.003 <T	.003 <T	.004 <T	.004 <T
SEP	.002 <T	BDL	.001 <T	.001 <T	.	.	.
OCT	.005	.006	.007	.009	.	.	.
NOV	.002	.002	.005	.008	.007	.008	.008
DEC	.004 <T	.002 <T	.	.	.002 <T	.002 <T	.002 <T
TOTAL NITRATES (MG/L)				DET'N LIMIT = .020		GUIDELINE = 10.000 (A1)	
JAN	.	.245	.620	.230	1.280	.300	.300
FEB	.	.275	.435	.270	.695	.275	.275
MAR	.190	.215	.445	.220	.255	.230	.230
APR	.195	.200	.400	.195	.445	.200	.200
MAY	.225	.190	.360	.190	.	.	.
JUN	.225	.210	.380	.195	.635	.220	.220
JUL	.120	.125	.170	.135	.	.	.
AUG	.085 <T	.095 <T	.270	.105	.440	.135	.135
SEP	.080 <T	.090 <T	.250	.095 <T	.	.	.
OCT	.085 <T	.090 <T	.280	.090 <T	.	.	.
NOV	.085	.130	.275	.140	1.320	.130	.130
DEC	.305	.285	.	.	.320	.190	.190

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
NITROGEN TOT KJELD (MG/L)					
		DET'N LIMIT = .020		GUIDELINE = N/A	
JAN	.160	.560	.170	.980	.170
FEB	.170	.320	.150	.560	.160
MAR	.190	.410	.150	.170	.120
APR	.280	.360	.200	.380	.140
MAY	.210	.030	.180	.	.
JUN	.270	.340	.170	.540	.140
JUL	.280	.260	.200	.	.
AUG	.240	.300	.200	.440	.160
SEP	.260	.420	.180	.	.
OCT	.280	.320	.170	.	.
NOV	.550	.520	.920	.460	.800
DEC	.350	.	.	.300	.150

PH (DMSNLESS)					
		DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
JAN	8.000	8.010	8.000	8.390	7.980
FEB	8.010	8.110	8.110	8.100	8.090
MAR	8.080	8.060	8.090	8.150	8.120
APR	8.260	8.180	8.180	8.200	8.230
MAY	8.230	8.200	8.280	.	.
JUN	8.240	8.160	8.180	8.210	8.300
JUL	8.290	8.180	8.080	.	.
AUG	8.330	8.140	8.170	8.190	8.220
SEP	8.320	8.150	8.120	.	.
OCT	8.230	8.300	8.280	.	.
NOV	8.330	8.200	8.220	8.240	8.340
DEC	8.290	.	.	8.250	8.330

DISTRIBUTION SYSTEM

RAW		TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
PHOSPHORUS FIL REACT (MG/L)						
JAN	.	.001 <T	.	DET'N LIMIT = .0005	.	GUIDELINE = N/A
FEB	.	BDL	.		.	
MAR	.001 <T	.001 <T	.		.	
APR	.002 <T	.000 <T	.		.	
MAY	.003	.000 <T	.		.	
JUN	.003	.002 <T	.		.	
JUL	BDL	.000 <T	.		.	
AUG	.002 <T	.002 <T	.		.	
SEP	.000 <T	.000 <T	.		.	
OCT	.001 <T	.001 <T	.		.	
NOV	.001	.000	.		.	
DEC	.005	.001 <T	.		.	
PHOSPHORUS TOTAL (MG/L)						
JAN	.	.003 <T	.	DET'N LIMIT = .002	.	GUIDELINE = .40 (F2)
FEB	.	.004 <T	.		.	
MAR	.008 <T	BDL	.		.	
APR	.021	.005 <T	.		.	
MAY	.011	.006 <T	.		.	
JUN	.017	.005 <T	.		.	
JUL	.011	.007 <T	.		.	
AUG	.004 <T	.002 <T	.		.	
SEP	BDL	BDL	.		.	
OCT	.015	.007 <T	.		.	
NOV	.013	.016	.		.	
DEC	.047	.002 <T	.		.	

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
SULPHATE (MG/L)					
JUL	24.490				
AUG	23.570	27.670	26.870		
SEP	23.290	26.080	25.970	24.760	24.700
OCT	25.000	25.670	25.800		
NOV	23.900	27.600	27.500		
DEC	30.500	27.200	27.200	25.800	25.600
				31.000	31.000
GUIDELINE = 500. (A3)					
DET'N LIMIT = .200					
TURBIDITY (FTU)					
JAN					
FEB		.370	.110	.750	.620
MAR	1.470	.210	.110	.580	.600
APR	4.600	.400	.140	.750	.720
MAY	.620	.310	.180	.550	.480
JUN	1.740	.660	.270		
JUL	1.300	.440	.280	.630	
AUG	.940	.610	.430		115
SEP	.980	.430	.370	.930	.710
OCT	5.300	.390	.440		
NOV	12.300	.370	.380		
DEC	33.000	.840	.830	.940	.780
				.760	.810
GUIDELINE = 1.00 (A1)					
DET'N LIMIT = .02					
SULPHATE (MG/L)					
JUL	24.490				
AUG	23.570	27.670	26.870		
SEP	23.290	26.080	25.970	24.760	24.700
OCT	25.000	25.670	25.800		
NOV	23.900	27.600	27.500		
DEC	30.500	27.200	27.200	25.800	25.600
				31.000	31.000
GUIDELINE = 500. (A3)					
DET'N LIMIT = .200					
TURBIDITY (FTU)					
JAN					
FEB		.370	.110	.750	.620
MAR	1.470	.210	.110	.580	.600
APR	4.600	.400	.140	.750	.720
MAY	.620	.310	.180	.550	.480
JUN	1.740	.660	.270		
JUL	1.300	.440	.280	.630	
AUG	.940	.610	.430		115
SEP	.980	.430	.370	.930	.710
OCT	5.300	.390	.440		
NOV	12.300	.370	.380		
DEC	33.000	.840	.830	.940	.780
				.760	.810
GUIDELINE = 1.00 (A1)					
DET'N LIMIT = .02					

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
METALS					
SILVER (UG/L)		DET'N LIMIT = .020		GUIDELINE = 50. (A1)	
JAN	.030 <T	.030 <T	.020 <T	3.100	.040 <T
FEB	.050 <T	.030 <T	.020 <T	.580	.040 <T
MAR	BDL	.060 <T	.030 <T	.040 <T	BDL
APR	BDL	BDL	BDL	BDL	.090 <T
MAY	BDL	BDL	BDL	.	.
JUN	BDL	BDL	BDL	.070 <T	.040 <T
JUL	BDL	.050 <T	BDL	.	.
AUG	BDL	.030 <T	BDL	2.600	BDL
SEP	.030 <T	BDL	.070 <T	.	.
OCT	BDL	BDL	.040 <T	.	.
NOV	.030 <T	BDL	BDL	BDL	BDL
DEC	BDL	.	.	BDL	BDL
ALUMINUM (UG/L)					
		DET'N LIMIT = .050		GUIDELINE = 100. (A4)	
JAN	87.000	81.200	64.960	55.680	54.520
FEB	88.160	63.800	56.840	47.560	47.560
MAR	105.560	88.160	84.680	1.972	70.760
APR	90.480	80.040	76.560	63.800	73.080
MAY	197.200	162.400	150.800	.	.
JUN	197.200	162.400	162.400	127.600	116.000
JUL	33.640	278.400	290.000	.	.
AUG	22.040	255.200	278.400	232.000	243.600
SEP	22.040	197.200	220.400	.	.
OCT	52.200	185.600	185.600	.	.
NOV	139.200	109.040	105.560	96.280	98.600
DEC	197.200	.	.	62.640	66.120

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW		TREATED		SITE 1		SITE 2	
				STANDING	FREE FLOW	STANDING	FREE FLOW
ARSENIC (UG/L)							
				DET'N LIMIT = 0.050			
				GUIDELINE = 50.0 (A1)			
JAN	.	.370 <T	.630 <T	.570 <T	.600 <T	.480 <T	
FEB	.	.490 <T	.530 <T	.550 <T	.420 <T	.370 <T	
MAR	.340 <T	.330 <T	.420 <T	.380 <T	BDL	.180 <T	
APR	.590 <T	.590 <T	.710 <T	.630 <T	.550 <T	.640 <T	
MAY	IIS	.550 <T	.600 <T	.690 <T	.	.	
JUN	.340 <T	.210 <T	.150 <T	.240 <T	.100 <T	.300 <T	
JUL	.430 <T	.380 <T	.360 <T	.360 <T	.	.	
AUG	.870 <T	.680 <T	.620 <T	.720 <T	.570 <T	.370 <T	
SEP	.780 <T	.640 <T	.590 <T	.640 <T	.	.	
OCT	.950 <T	.550 <T	.670 <T	.550 <T	.	.	
NOV	1.100	.530 <T	.490 <T	.560 <T	.430 <T	BDL	
DEC	1.300	.700 <T	.	.	.650 <T	.430 <T	
BARIUM (UG/L)							
				DET'N LIMIT = 0.020			
				GUIDELINE = 1000. (A1)			
JAN	.	22.000	23.000	21.000	21.000	20.000	
FEB	.	19.000	20.000	19.000	19.000	18.000	
MAR	20.000	19.000	19.000	19.000	3.800	17.000	
APR	20.000	18.000	18.000	18.000	18.000	20.000	
MAY	IIS	21.000	22.000	20.000	.	.	
JUN	22.000	21.000	21.000	22.000	21.000	22.000	
JUL	23.000	23.000	22.000	23.000	.	.	
AUG	23.000	24.000	24.000	23.000	23.000	23.000	
SEP	22.000	22.000	22.000	22.000	.	.	
OCT	24.800	21.000	23.000	21.000	.	.	
NOV	22.000	20.000	21.000	20.000	21.000	23.000	
DEC	27.000	23.000	.	.	21.000	21.000	

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

		SITE 1		SITE 2	
		STANDING		STANDING	
		FREE FLOW		FREE FLOW	
		DET'N LIMIT = 0.200		GUIDELINE = 5000. (A1)	
BORON (UG/L)	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
JAN	23.000	23.000	22.000	23.000	22.000
FEB	20.000	27.000	20.000	20.000	19.000 <T
MAR	22.000	22.000	21.000	17.000 <T	20.000
APR	21.000	20.000 <T	23.000	18.000 <T	22.000
MAY	20.000 <T	24.000	19.000 <T	.	.
JUN	35.000	31.000	37.000	25.000	21.000
JUL	21.000	20.000 <T	20.000 <T	.	.
AUG	24.000	24.000	26.000	24.000	40.000
SEP	21.000	22.000	24.000	.	.
OCT	32.000	40.000	41.000	.	.
NOV	68.000	37.000	25.000	28.000	77.000
DEC	57.000	.	.	54.000	52.000
BERYLLIUM (UG/L)		DET'N LIMIT = 0.010		GUIDELINE = .20 (H)	
JAN	BDL	BDL	BDL	BDL	BDL
FEB	.020 <T	.010 <T	BDL	.030 <T	BDL
MAR	.030 <T	.030 <T	.010 <T	BDL	.010 <T
APR	.030 <T	BDL	.020 <T	.020 <T	.050 <T
MAY	BDL	BDL	BDL	.	.
JUN	.040 <T	BDL	.040 <T	.030 <T	BDL
JUL	BDL	BDL	BDL	.	.
AUG	.140 <T	BDL	.020 <T	BDL	BDL
SEP	.020 <T	BDL	.020 <T	.	.
OCT	BDL	.030 <T	.110 <T	.	.
NOV	.120 <T	BDL	.020 <T	.080 <T	.070 <T
DEC	.180 <T	.	.	.180 <T	.120 <T

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
CADMIUM (UG/L)		DET'N LIMIT = 0.050		GUIDELINE = 5.000 (A1)	
JAN	.070 <T	.090 <T	BDL	.150 <T	BDL
FEB	BDL	.050 <T	BDL	.050 <T	BDL
MAR	BDL	.050 <T	BDL	BDL	BDL
APR	BDL	.080 <T	BDL	.080 <T	.070 <T
MAY	BDL	BDL	BDL	.	.
JUN	BDL	.070 <T	BDL	BDL	BDL
JUL	BDL	BDL	BDL	.	.
AUG	BDL	BDL	BDL	BDL	BDL
SEP	BDL	BDL	BDL	.	.
OCT	BDL	BDL	BDL	.	.
NOV	BDL	BDL	.060 <T	.080 <T	.130 <T
DEC	.090 <T	BDL	BDL	BDL	BDL
COBALT (UG/L)		DET'N LIMIT = 0.020		GUIDELINE = 1000 (H)	
JAN	.150 <T	49.000	55.000	.470 <T	.150 <T
FEB	.020 <T	25.000	31.000	.110 <T	.050 <T
MAR	.940	32.000	32.000	.020 <T	.240 <T
APR	.050 <T	37.000	30.000	.140 <T	.080 <T
MAY	1.200	33.000	28.000	.	.
JUN	.030 <T	.100 <T	.070 <T	.450 <T	.100 <T
JUL	.040 <T	.070 <T	.030 <T	.	.
AUG	.080 <T	.100 <T	.060 <T	.040 <T	.110 <T
SEP	.080 <T	.070 <T	.110 <T	.	.
OCT	.140 <T	.130 <T	.200 <T	.	.
NOV	.220 <T	.080 <T	.060 <T	.080 <T	.150 <T
DEC	.180 <T	.	.	.170 <T	.240 <T

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

		SITE 1		SITE 2	
		RAW	TREATED	STANDING	FREE FLOW
		STANDING		STANDING	
		FREE FLOW		FREE FLOW	
		DET'N LIMIT = 0.100		DET'N LIMIT = 0.100	
		GUIDELINE = 50. (A1)		GUIDELINE = 50. (A1)	
CHROMIUM (UG/L)					
JAN	.	.220 <T	.290 <T	.200 <T	.190 <T
FEB	.	.140 <T	.770 <T	.190 <T	.140 <T
MAR	.230 <T	.260 <T	.690 <T	.240 <T	.210 <T
APR	.580 <T	.380 <T	.930 <T	1.200	7.600
MAY	118	.550 <T	1.000 <T	.530 <T	.110 <T
JUN	.320 <T	1.600	1.100	1.600	.
JUL	.240 <T	.890 <T	.260 <T	.250 <T	2.900
AUG	2.300	.470 <T	.390 <T	.480 <T	.
SEP	.180 <T	.220 <T	.130 <T	.320 <T	1.000 <T
OCT	.180 <T	3.500	5.100	4.600	.
NOV	6.000	5.900	1.900	.360 <T	4.400
DEC	7.100	6.300	.	.	5.900
		DET'N LIMIT = .100		GUIDELINE = 1000 (A3)	
COOPER (UG/L)					
JAN	.	1.200	19.000	2.900	35.000
FEB	.	.950 <T	17.000	2.700	26.000
MAR	.870 <T	.670 <T	11.000	2.700	5.500
APR	1.100	.880 <T	12.000	2.700	35.000
MAY	118	1.100	14.000	3.200	.
JUN	1.100	.770 <T	15.000	3.800	44.000
JUL	1.100	1.100	14.000	3.500	.
AUG	1.100	.880 <T	15.000	3.800	41.000
SEP	1.100	2.000	15.000	4.100	.
OCT	1.750	.890 <T	16.000	5.200	.
NOV	1.700	1.000 <T	20.000	5.800	46.000
DEC	2.100	1.100	.	.	43.000

DISTRIBUTION SYSTEM

RAW		TREATED		SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW		
IRON (UG/L)							
		DET'N LIMIT = 4.000		GUIDELINE = 300. (A3)			
JAN	.	7.000 <T	34.000 <T	33.000 <T	180.000	180.000	
FEB	.	BDL	9.700 <T	11.000 <T	150.000	150.000	
MAR	36.000 <T	4.700 <T	16.000 <T	14.000 <T	BDL	200.000	
APR	95.000	10.000 <T	75.000	72.000	150.000	150.000	
MAY	IIS	9.300 <T	95.000	92.000	.	.	
JUN	48.000 <T	BDL	67.000	53.000	140.000	99.000	
JUL	35.000 <T	21.000 <T	69.000	78.000	.	.	
AUG	28.000 <T	BDL	62.000	71.000	96.000	100.000	
SEP	25.000 <T	BDL	61.000	99.000	.	.	
OCT	61.000	5.700 <T	80.000	88.000	160.000	130.000	
NOV	240.000	BDL	96.000	120.000	150.000	150.000	
DEC	350.000	5.500 <T	.	.	.	.	
MERCURY (UG/L)							
		DET'N LIMIT = 0.010		GUIDELINE = 1.000 (A1)			
JAN	.	.010	.	.030	.	.010	
FEB	.	.010	.	.010	.	BDL	
MAR	.010	.010	.	.020	.	BDL	
APR	.010	.020	.	.030	.	BDL	
MAY	BDL	.020 <T	.	.020 <T	.	.	
JUN	BDL	BDL	.	.040 <T	.	BDL	
JUL	.050 <T	.040 <T	.	.050 <T	.	.	
AUG	.020 <T	.030 <T	.	.030 <T	.	BDL	
SEP	.030 <T	.040 <T	.	.040 <T	.	.	
OCT	.030 <T	.030 <T	.	.030 <T	.	.	
NOV	.030 <T	.060	.	.040 <T	.	.	
DEC	.030 <T	.050 <T	.	.040 <T	.	BDL	
						.020 <T	

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
MANGANESE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 50.0 (A3)	
JAN	.700	33.000	34.000	4.300	4.200
FEB	.690	16.000	19.000	3.000	3.300
MAR	1.000	21.000	21.000	.060 <T	4.700
APR	1.000	31.000	27.000	2.800	2.900
MAY	1.800	30.000	27.000	.	.
JUN	.450 <T	8.300	8.400	3.200	2.900
JUL	2.500	7.500	9.700	.	.
AUG	1.300	11.000	12.000	2.600	3.200
SEP	.600	11.000	16.000	.	.
OCT	1.500	12.000	14.000	.	.
NOV	.620	12.000	12.000	2.200	1.900
DEC	.690	.	.	1.900	1.700
MOLYBDENUM (UG/L)		DET'N LIMIT = 0.020		GUIDELINE = 500 (H)	
JAN	1.200	1.200	1.200	1.100	1.100
FEB	1.100	1.100	1.000	1.000	.950
MAR	1.200	1.100	1.100	.870	1.000
APR	.970	1.000	.990	.850	1.100
MAY	1.100	1.200	1.100	.	.
JUN	1.000	1.100	1.000	1.100	1.100
JUL	1.200	1.200	1.200	.	.
AUG	1.200	1.300	1.100	1.000	1.100
SEP	1.200	1.100	1.200	.	.
OCT	1.100	1.000	1.200	.	.
NOV	1.000	1.100	1.100	1.100	1.100
DEC	.730	.	.	.940	1.100

DISTRIBUTION SYSTEM

DATE (UG/L)	DET'N LIMIT = 0.050	GUIDELINE = 50. (A1)
JAN	1.800	3.100
FEB	1.500	1.100
MAR	1.200	.110 <T
APR	1.300	1.100
MAY	1.900	.290
JUN	2.100	.390
JUL	1.600	.440
AUG	2.200	.510
SEP	1.700	.520
OCT	2.000	.920
NOV	1.700	.530
DEC	1.100	.460

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1	SITE 2
		STANDING	FREE FLOW
		STANDING	FREE FLOW
ANTIMONY (UG/L)			
DET'N LIMIT = .050			
GUIDELINE = 146. (D4)			
JAN	.160 <T	.310	.430
FEB	.190 <T	.280	.280
MAR	.200	.270	.260
APR	.180 <T	.280	.230
MAY	.220	.360	.290
JUN	.180 <T	.200 <T	.200 <T
JUL	.210	.250	.200 <T
AUG	.770	.750	.730
SEP	.590	.540	.600
OCT	.610	.690	.590
NOV	.600	.710	.580
DEC	.260	.	.
SELENIUM (UG/L)			
DET'N LIMIT = 0.200			
GUIDELINE = 10. (A1)			
JAN	1.200 <T	.940 <T	1.600 <T
FEB	.670 <T	1.100 <T	.920 <T
MAR	.470 <T	.850 <T	.970 <T
APR	.410 <T	1.700 <T	2.400 <T
MAY	.115	3.400 <T	2.300 <T
JUN	.730 <T	1.200 <T	BDL
JUL	1.100 <T	2.300 <T	2.400 <T
AUG	BDL	BDL	.890 <T
SEP	BDL	.290 <T	2.100 <T
OCT	BDL	5.100 <T	3.000 <T
NOV	.390 <T	1.900 <T	2.300 <T
DEC	BDL	.	.
		1.500 <T	1.000 <T
		4.900 <T	2.300 <T

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
STRONTIUM (UG/L)					
		DET'N LIMIT = .050		GUIDELINE = 2000. (H)	
JAN	200.000	190.000	190.000	200.000	200.000
FEB	160.000	160.000	160.000	170.000	170.000
MAR	170.000	170.000	170.000	61.000	170.000
APR	160.000	170.000	160.000	150.000	170.000
MAY	160.000	170.000	170.000	.	.
JUN	160.000	160.000	160.000	160.000	190.000
JUL	170.000	170.000	180.000	.	.
AUG	180.000	180.000	180.000	170.000	180.000
SEP	180.000	170.000	190.000	.	.
OCT	179.000	190.000	180.000	.	.
NOV	180.000	170.000	170.000	180.000	190.000
DEC	180.000	.	.	170.000	170.000
TITANIUM (UG/L)					
		DET'N LIMIT = .050		GUIDELINE = N/A	
JAN	3.800	16.000	27.000	3.900	3.900
FEB	3.800	8.200	10.000	3.900	3.600
MAR	2.500	8.400	9.700	.420 <T	1.900
APR	2.100	9.800	9.300	2.800	2.000
MAY	3.100	9.900	9.300	.	.
JUN	3.000	3.000	3.100	3.100	2.800
JUL	2.400	2.000 <T	1.900 <T	.	.
AUG	8.800	8.900	7.900	8.200	9.500
SEP	5.300	4.900	4.300	.	.
OCT	4.350	2.900	3.200	.	.
NOV	9.600	5.700	5.400	5.500	4.200
DEC	12.000	.	.	2.600	2.500

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

		SITE 1		SITE 2	
RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
THALLIUM (UG/L)					
		DET'N LIMIT = .010		GUIDELINE = 13. (D4)	
JAN	.020 <T	.010 <T	.010 <T	BDL	BDL
FEB	.020 <T	.030 <T	.010 <T	.020 <T	.010 <T
MAR	.020 <T	.020 <T	.020 <T	BDL	BDL
APR	BDL	BDL	BDL	BDL	BDL
MAY	IIS	BDL	BDL	.	.
JUN	BDL	.020 <T	BDL	BDL	.020 <T
JUL	.020 <T	BDL	.020 <T	.	.
AUG	.020 <T	.020 <T	BDL	BDL	BDL
SEP	.020 <T	BDL	.030 <T	.	.
OCT	BDL	BDL	BDL	.	.
NOV	BDL	BDL	BDL	BDL	BDL
DEC	BDL	.	.	BDL	BDL
URANIUM (UG/L)					
		DET'N LIMIT = .020		GUIDELINE = 20. (A2)	
JAN	.340	.360	.340	.310	.340
FEB	.400	.360	.380	.360	.350
MAR	.360	.340	.350	.090 <T	.290
APR	.320	.290	.320	.260	.360
MAY	.380	.360	.380	.	.
JUN	.370	.340	.390	.330	.400
JUL	.350	.360	.380	.	.
AUG	.380	.370	.330	.380	.360
SEP	.350	.310	.360	.	.
OCT	.390	.360	.370	.	.
NOV	.320	.290	.330	.280	.290
DEC	.360	.	.	.290	.280

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW		TREATED		SITE 1		SITE 2	
				STANDING	FREE FLOW	STANDING	FREE FLOW
VANADIUM (UG/L)							
				DET'N LIMIT = .050		GUIDELINE = 100 (H)	
JAN	.	.290 <T	.280 <T	.270 <T	.250 <T	.230 <T	
FEB	.	.230 <T	.160 <T	.170 <T	.150 <T	.140 <T	
MAR	.210 <T	.310 <T	.230 <T	.220 <T	.100 <T	.230 <T	
APR	.320 <T	.250 <T	.240 <T	.210 <T	.180 <T	.180 <T	
MAY	IIS	.250 <T	.200 <T	.230 <T	.	.	
JUN	.180 <T	.240 <T	.190 <T	.160 <T	.150 <T	.170 <T	
JUL	.230 <T	.410 <T	.350 <T	.290 <T	.	.	
AUG	.210 <T	.430 <T	.310 <T	.340 <T	.210 <T	.270 <T	
SEP	.220 <T	.450 <T	.330 <T	.390 <T	.	.	
OCT	.220 <T	.540	.400 <T	.400 <T	.	.	
NOV	.470 <T	.400 <T	.310 <T	.320 <T	.260 <T	.320 <T	
DEC	.820	.510	.	.	.280 <T	.310 <T	
ZINC (UG/L)							
				DET'N LIMIT = .001		GUIDELINE = 5000. (A3)	
JAN	.	1.500	14.000	2.300	41.000	9.600	
FEB	.	1.600	12.000	1.700	39.000	6.900	
MAR	1.100	.780 <T	8.200	3.000	.780 <T	5.500	
APR	1.500	1.100	8.000	1.900	44.000	8.000	
MAY	IIS	1.700	10.000	2.500	.	.	
JUN	1.500	.660 <T	12.000	3.000	42.000	7.000	
JUL	1.500	1.700	12.000	2.600	.	.	
AUG	1.100	.880 <T	13.000	1.800	31.000	5.500	
SEP	1.800	2.000	11.000	2.600	.	.	
OCT	3.260	.800 <T	10.000	3.200	.	.	
NOV	3.000	.610 <T	15.000	2.600	43.000	8.000	
DEC	4.500	1.600	.	.	47.000	9.300	

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW		TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
PESTICIDES & PCB						
ALPHA BHC (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 700 (G)	
JAN	.	2.000 <T	.	BDL	.	2.000 <T
FEB	.	1.000 <T	.	2.000 <T	.	1.000 <T
MAR	BDL	1.000 <T	.	INR	.	BDL
APR	1.000 <T	1.000 <T	.	ISM	.	BDL
MAY	2.000 <T	1.000 <T	.	2.000 <T	.	.
JUN	2.000 <T	1.000 <T	.	1.000 <T	.	BDL
JUL	BDL	3.000 <T	.	BDL	.	.
AUG	1.000 <T	BDL	.	ILA	.	ILA
SEP	1.000 <T	BDL	.	IRE	.	.
OCT	BDL	BDL	.	BDL	.	.
NOV	BDL	1.000 <T	.	BDL	.	BDL
DEC	2.000 <T	2.000 <T	.	.	.	1.000 <T
LINDANE (NG/L)						
			DET'N LIMIT = 1.000		GUIDELINE = 4000 (A1)	
JAN	.	BDL	.	BDL	.	BDL
FEB	.	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	INR	.	BDL
APR	BDL	BDL	.	ISM	.	BDL
MAY	BDL	BDL	.	BDL	.	.
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	.
AUG	BDL	BDL	.	ILA	.	ILA
SEP	BDL	BDL	.	IRE	.	.
OCT	BDL	BDL	.	BDL	.	.
NOV	BDL	BDL	.	BDL	.	BDL
DEC	1.000 <T	1.000 <T	.	.	.	BDL

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW	TREATED	SITE 1		SITE 2	
		STANDING	FREE FLOW	STANDING	FREE FLOW
PHENOLICS					
PHENOLICS (UG/L)		DET'N LIMIT = 0.2		GUIDELINE = 2.00 (A3)	
JAN	.	BDL	.	.	.
FEB	.	.600 <T	.	.	.
MAR	BDL	BDL	.	.	.
APR	.200 <T	.200 <T	.	.	.
MAY	.600 <T	.600 <T	.	.	.
JUN	1.400	1.400	.	.	.
JUL	.600 <T	.800 <T	.	.	.
AUG	2.000	2.000	.	.	.
SEP	BDL	BDL	.	.	.
OCT	1.400	1.200	.	.	.
NOV	.200 <T	.200 <T	.	.	.
DEC	.800	.800	.	.	.

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

		SITE 1		SITE 2	
RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
VOLATILES					
BENZENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 5.0 (B1)	
MAR	BDL	.	INR	.	BDL
APR	BDL	.	BDL	.	BDL
MAY	BDL	.	BDL	.	.
JUN	BDL	.	BDL	.	BDL
JUL	BDL	.	BDL	.	.
AUG	.050 <T	.	BDL	.	BDL
SEP	BDL	.	BDL	.	.
OCT	BDL	.	BDL	.	.
NOV	BDL	.	BDL	.	BDL
DEC	BDL	.	.	.	BDL
TOLUENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 24.0 (B4)	
MAR	BDL	.	INR	.	BDL
APR	BDL	.	.050 UCS	.	BDL
MAY	BDL	.	BDL	.	.
JUN	BDL	.	.050 <T	.	BDL
JUL	BDL	.	BDL	.	.
AUG	BDL	.	BDL	.	BDL
SEP	BDL	.	BDL	.	.
OCT	BDL	.	BDL	.	.
NOV	BDL	.	BDL	.	BDL
DEC	BDL	.	.050 <T	.	.050 <T

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

		SITE 1		SITE 2	
RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW

ETHYLBENZENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 2.4 (B4)	
MAR	BDL	.	INR	.	BDL
APR	BDL	.	BDL	.	BDL
MAY	BDL	.	BDL	.	.
JUN	BDL	.	BDL	.	.050 <T
JUL	BDL	.	BDL	.	.
AUG	BDL	.	BDL	.	BDL
SEP	BDL	.	BDL	.	.
OCT	.100 <T	.	BDL	.	.
NOV	BDL	.	BDL	.	.050 <T
DEC	BDL	.	BDL	.	BDL

STYRENE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 46.5 (D2)	
OCT	.600	.	.100 <T	.	.
NOV	.200 <T	.	.200 <T	.	.450 <T
DEC	.100 <T	.	.	.	.100 <T

CHLOROFORM (UG/L)		DET'N LIMIT = .100		GUIDELINE = 350 (A1+)	
MAR	BDL	.	INR	.	17.200
APR	BDL	.	14.300	.	12.700
MAY	BDL	.	15.400	.	.
JUN	BDL	.	14.600	.	15.200
JUL	BDL	.	19.800	.	.
AUG	BDL	.	23.500	.	23.900
SEP	BDL	.	18.400	.	.
OCT	1.400	.	20.100	.	.
NOV	.400 <T	.	13.500	.	14.400
DEC	BDL	.	.	.	11.800

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

		SITE 1		SITE 2	
RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
CARBON TETRACHLORIDE (UG/L)		DET'N LIMIT = .200		GUIDELINE = 5.0 (D1)	
MAR	BDL	.	INR	.	BDL
APR	BDL	.	BDL	.	BDL
MAY	BDL	.	BDL	.	.
JUN	BDL	.	BDL	.	BDL
JUL	BDL	.	BDL	.	.
AUG	BDL	.	BDL	.	BDL
SEP	BDL	.	BDL	.	.
OCT	BDL	.	BDL	.	BDL
NOV	BDL	.	BDL	.	.
DEC	BDL	.	BDL	.	BDL
		.	.	.	.400 <T
DICHLOROBROMOMETHANE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 350 (A1+)	
MAR	BDL	.	INR	.	10.600
APR	BDL	.	9.550	.	8.050
MAY	BDL	.	9.900	.	.
JUN	BDL	.	9.500	.	8.400
JUL	BDL	.	13.650	.	.
AUG	BDL	.	13.800	.	11.300
SEP	BDL	.	11.350	.	.
OCT	.800	.	12.400	.	.
NOV	.100 <T	.	9.450	.	8.700
DEC	BDL	.	.	.	6.800

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

RAW		TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW

CHLORODIBROMOMETHANE (UG/L)						
			DET'N LIMIT = .100		GUIDELINE = 350 (A1+)	
MAR	BDL	7.300	.	INR	.	5.000
APR	BDL	6.400	.	6.100	.	3.800
MAY	BDL	4.000	.	3.900	.	.
JUN	BDL	6.900	.	5.300	.	4.000
JUL	BDL	5.200	.	5.200	.	.
AUG	BDL	8.600	.	7.300	.	6.500
SEP	BDL	6.200	.	5.400	.	.
OCT	.500 <T	5.700	.	5.800	.	.
NOV	BDL	4.600	.	4.000	.	3.500
DEC	BDL	4.600	.	.	.	3.000

T-CHLOROMETHYLENE (UG/L)						
			DET'N LIMIT = .050		GUIDELINE = 10.0 (C2)	
MAR	BDL	BDL	.	INR	.	BDL
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	BDL	.	.	.	.
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	.
AUG	BDL	BDL	.	BDL	.	.050 <T
SEP	BDL	BDL	.	BDL	.	.
OCT	BDL	BDL	.	BDL	.	.
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL

BROMOFORM (UG/L)						
			DET'N LIMIT = .200		GUIDELINE = 350 (A1+)	
MAR	BDL	.400 <T	.	INR	.	.400 <T
APR	BDL	.400 <T	.	.400 <T	.	.200 <T
MAY	BDL	.200 <T	.	.400 <T	.	.
JUN	BDL	.400 <T	.	.400 <T	.	.200 <T
JUL	BDL	.200 <T	.	.400 <T	.	.
AUG	BDL	.600 <T	.	.600 <T	.	.400 <T
SEP	BDL	.600 <T	.	.600 <T	.	.
OCT	BDL	.600 <T	.	.600 <T	.	.
NOV	BDL	.400 <T	.	.400 <T	.	.400 <T
DEC	BDL	BDL	.	.	.	BDL

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

		SITE 1		SITE 2	
RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW

TOTL TRINALOMETHANES (UG/L)		DET'N LIMIT = .500		GUIDELINE = 350 (A1)	
MAR	BDL	44.300	NR		33.200
APR	BDL	37.850	30.350		24.750
MAY	BDL	33.550	29.600		
JUN	BDL	41.150	29.800		27.800
JUL	BDL	56.600	39.050		
AUG	BDL	55.600	45.200		42.100
SEP	BDL	42.800	35.750		
OCT	2.700 <T	42.850	38.900		
NOV	.500 <T	34.100	27.350		27.000
DEC	BDL	38.850			21.600

Table 6

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BACTERIOLOGICAL			
STANDARD PLATE COUNT MEMBRANE FILTRATION	CT/ML	0	500/ML(A1)
P/A BOTTLE		0	0 (A1*)
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100mL(A1)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A
CHLOROAROMATICS			
HEXACHLOROBUTADIENE	NG/L	1.000	450. (D4)
1,2,3-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,3,4-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,3,5-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,4-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,4,5-TETRACHLOROBENZENE	NG/L	1.000	38000 (D4)
1,3,5-TRICHLOROBENZENE	NG/L	5.000	10000 (D4)
HEXACHLOROBENZENE	NG/L	1.0	10. (C1)
HEXACHLOROETHANE	NG/L	1.000	1900. (D4)
OCTACHLOROSTYRENE	NG/L	1.000	N/A
PENTACHLOROBENZENE	NG/L	1.000	74000 (D4)
2,3,6-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,4,5-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,6,8-TRICHLOROTOLUENE	NG/L	5.000	N/A
CHLOROPHENOLS			
2,3,4-TRICHLOROPHENOL	NG/L	50.	N/A
2,3,4,5-TETRACHLOROPHENOL	NG/L	50.	N/A
2,3,5,6-TETRACHLOROPHENOL	NG/L	50.	N/A
2,4,5-TRICHLOROPHENOL	NG/L	50.	2600000 (D4)
2,4,6-TRICHLOROPHENOL	NG/L	50.	5000. (B1)
PENTACHLOROPHENOL	NG/L	50.	60000. (B1)
CHEMISTRY (FLD)			
FIELD COMBINED CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD FREE CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD TOTAL CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD PH	DMSNLESS	N/A	6.5-8.5(A4)
FIELD TEMPERATURE	°C	N/A	<15 °C(A1)
FIELD TURBIDITY	FTU	N/A	1.0 (A1)
CHEMISTRY (LAB)			
ALKALINITY	MG/L	.200	30-500(A4)
CALCIUM	MG/L	.100	100. (F2)
CYANIDE	MG/L	.001	.20(A1)
CHLORIDE	MG/L	.200	250. (A3)
COLOUR	TCU	.5	5.0 (A3)
CONDUCTIVITY	UMHO/CM	1.	400. (F2)
FLUORIDE	MG/L	.01	2.4 (A1)
HARDNESS	MG/L	.50	80-100(A4)
MAGNESIUM	MG/L	.05	30. (F2)

SCAN/PARAMETER	UNIT	DETECTION	
		LIMIT	GUIDELINE
NITRITE	MG/L	.001	1.0 (A1)
TOTAL NITRATES	MG/L	.02	10. (A1)
NITROGEN TOTAL KJELDAHL	MG/L	.02	N/A
PH	DMS/LESS	N/A	6.5-8.5 (A4)
PHOSPHORUS FIL REACT	MG/L	.0005	N/A
PHOSPHORUS TOTAL	MG/L	.002	.40 (F2)
TOTAL SOLIDS	MG/L	1.	500. (A3)
TURBIDITY	FTU	.02	1.0 (A1)

METALS

ALUMINUM	UG/L	.050	100. (A4)
ANTIMONY	UG/L	.050	146. (D4)
ARSENIC	UG/L	.050	50. (A1)
BARIUM	UG/L	.020	1000. (A1)
BORON	UG/L	.200	5000. (A1)
BERYLLIUM	UG/L	.010	0.20 (H)
CADMIUM	UG/L	.050	5.0 (A1)
COBALT	UG/L	.020	1000. (H)
CHROMIUM	UG/L	.100	50. (A1)
COPPER	UG/L	.100	1000. (A3)
IRON	UG/L	5.0	300. (A3)
MERCURY	UG/L	.01	1.0 (A1)
MANGANESE	UG/L	.050	50. (A3)
MOLYBDENUM	UG/L	.020	500. (H)
NICKEL	UG/L	.100	50. (F3)
LEAD	UG/L	.020	50. (A1)
SELENIUM	UG/L	.200	10. (A1)
SILVER	UG/L	.020	50. (A1)
STRONTIUM	UG/L	.100	2000. (H)
THALLIUM	UG/L	.010	13. (D4)
TITANIUM	UG/L	.100	N/A
URANIUM	UG/L	.020	20. (A2)
VANADIUM	UG/L	.020	100. (H)
ZINC	UG/L	.020	5000. (A3)

PHENOLICS

PHENOLICS (UNFILTERED REACTIVE)	UG/L	.2	2.0 (A3)
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PESTICIDES & PCB

ALDRIN	MG/L	1.0	700. (A1)
AMETRINE	MG/L	50.	300000. (D3)
ATRAZINE	MG/L	50.	60000. (B3)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	MG/L	1.0	700. (G)
BETA HEXACHLOROCYCLOHEXANE (BHC)	MG/L	1.0	300. (G)
GAMMA HEXACHLOROCYCLOHEXANE (LINDANE)	MG/L	1.0	4000. (A1)
ALPHA CHLORDANE	MG/L	2.0	7000. (A1)
GAMMA CHLORDANE	MG/L	2.0	7000. (A1)
BLADIX	MG/L	100.	10000. (B3)
DIELDRIN	MG/L	2.0	700. (A1)
METHOXYCHLOR	MG/L	5.0	100000. (A1)
ENDOSULFAN 1 (THIODAN I)	MG/L	2.0	74000. (D4)
ENDOSULFAN 2 (THIODAN II)	MG/L	4.0	74000. (D4)
ENDRIN	MG/L	4.0	200. (A1)
ENDOSULFAN SULPHATE (THIODAN SULPHATE)	MG/L	4.0	N/A
HEPTACHLOR EPOXIDE	MG/L	1.0	3000. (A1)

SCAN/PARAMETER	DETECTION		
	UNIT	LIMIT	GUIDELINE
HEPTACHLOR	NG/L	1.0	3000. (A1)
METOLACHLOR	NG/L	500.	50000. (B3)
MIREX	NG/L	5.0	N/A
OKYCHLORDANE	NG/L	2.0	N/A
O,P-DDT	NG/L	5.0	30000. (A1)
PCB	NG/L	20.0	3000. (A2)
O,P-DDD	NG/L	5.0	N/A
PPDDE	NG/L	1.0	30000. (A1)
PPDDT	NG/L	5.0	30000. (A1)
ATRATONE	NG/L	50.	N/A
ALACHLOR	NG/L	500.	35000. (D2)
PROMETONE	NG/L	50.	52500. (D3)
PROPAZINE	NG/L	50.	16000. (D2)
PROMETRYNE	NG/L	50.	1000. (B3)
SENCOR (METRIBUIN)	NG/L	100.	80000. (B2)
SIMASINE	NG/L	50.	10000. (B3)

POLYAROMATIC HYDROCARBONS

PHENANTHRENE	NG/L	10.0	N/A
ANTHRACENE	NG/L	1.0	N/A
FLUORANTHENE	NG/L	20.0	42000. (D4)
PYRENE	NG/L	20.0	N/A
BENZO(A)ANTHRACENE	NG/L	20.0	N/A
CHRYSENE	NG/L	50.0	N/A
DIMETHYL BENZO(A)ANTHRACENE	NG/L	5.0	N/A
BENZO(E)PYRENE	NG/L	50.0	N/A
BENZO(B)FLUORANTHENE	NG/L	10.0	N/A
PERYLENE	NG/L	10.0	N/A
BENZO(K)FLUORANTHENE	NG/L	1.0	N/A
BENZO(A)PYRENE	NG/L	5.0	10. (B1)
BENZO(G,H,I)PERYLENE	NG/L	20.0	N/A
DIBENZO(A,H)ANTHRACENE	NG/L	10.0	N/A
INDENO(1,2,3-C,D)PYRENE	NG/L	20.0	N/A
BENZO(B)CHRYSENE	NG/L	2.0	N/A
CORONENE	NG/L	10.0	N/A

SPECIFIC PESTICIDES

TOLAPHENE	NG/L	N/A	5000. (A1)
2,4,5-TRICHLOROBUTYRIC ACID (2,4,5-T)	NG/L	50.	280000. (B1)
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.	100000. (A1)
2,4-DICHLOROPHENOXYBUTYRIC ACID	NG/L	200.	18000. (B3)
2,4-D PROPIONIC ACID	NG/L	100.	N/A
DICAMBA	NG/L	100.	87000. (B3)
PICHLORAM	NG/L	100.	2450000. (D3)
SILVEX (2,4,5-TP)	NG/L	50.	10000. (A1)
DIAZINON	NG/L	20.	14000. (A1)
DICHLOROVOS	NG/L	20.	N/A
DURSEAN	NG/L	20.	N/A
ETHION	NG/L	20.	35000. (G)
GUTHION	NG/L	N/A	N/A
MALATHION	NG/L	20.	160000. (G)
MEVINPHOS	NG/L	20.	N/A
METHYL PARATHION	NG/L	50.	7000. (B3)
METHYLTRITHION	NG/L	20.	N/A
PARATHION	NG/L	20.	35000. (B1)

SCAN/PARAMETER	DETECTION		
	UNIT	LIMIT	GUIDELINE
PHORATE (THIMET)	NG/L	20.	35. (D2)
RELDAN	NG/L	20.	N/A
RONNEL	NG/L	20.	N/A
AMINOCARB	NG/L	N/A	N/A
BENOMYL	NG/L	N/A	N/A
BUX (METALKAMATE)	NG/L	2000.	N/A
CARBOFURAN	NG/L	2000.	18000. (D3)
CICP (CHLORPROPHAM)	NG/L	2000.	350000. (G)
DIALLATE	NG/L	2000.	30000. (H)
EPTAM	NG/L	2000.	N/A
IPC	NG/L	2000.	N/A
PROPOXUR (BAYGON)	NG/L	2000.	90000. (G)
SEVIN (CARBARYL)	NG/L	200.	70000. (A1)
SUTAN (BUTYLATE)	NG/L	2000.	245000. (D3)

VOLATILES

BENZENE	UG/L	.050	5.0 (B1)
TOLUENE	UG/L	.050	24.0 (B4)
ETHYLBENZENE	UG/L	.050	2.4 (B4)
PARA-XYLENE	UG/L	.100	300. (B4)
META-XYLENE	UG/L	.100	300. (B4)
ORTHO-XYLENE	UG/L	.050	300. (B4)
1,1-DICHLOROETHYLENE	UG/L	.100	7.0 (D1)
ETHYLENE DIBROMIDE	UG/L	.05	50. (G)
METHYLENE CHLORIDE	UG/L	.500	1750. (D3)
TRANS-1,2-DICHLOROETHYLENE	UG/L	.100	350. (D3)
1,1-DICHLOROETHANE	UG/L	.100	N/A
CHLOROFORM	UG/L	.100	350. (A1+)
1,1,1-TRICHLOROETHANE	UG/L	.020	200. (D1)
1,2-DICHLOROETHANE	UG/L	.050	5.0 (D1)
CARBON TETRACHLORIDE	UG/L	.200	5.0 (D1)
1,2-DICHLOROPROPANE	UG/L	.050	10.0 (G)
TRICHLOROETHYLENE	UG/L	.100	5.0 (D1)
DICHLOROBROMOMETHANE	UG/L	.050	350. (A1+)
1,1,2-TRICHLOROETHANE	UG/L	.050	.60 (D4)
CHLORODIBROMOMETHANE	UG/L	.100	350. (A1+)
TETRACHLOROETHYLENE	UG/L	.050	10.0 (C2)
BROMOFORM	UG/L	.200	350. (A1+)
1,1,2,2-TETRACHLOROETHANE	UG/L	.050	0.17 (D4)
CHLOROBENZENE	UG/L	.100	1510. (D3)
1,4-DICHLOROBENZENE	UG/L	.100	5.0 (B1)
1,3-DICHLOROBENZENE	UG/L	.100	130. (G)
1,2-DICHLOROBENZENE	UG/L	.050	200. (B1)
TRIFLUOROCHLOROTOLUENE	UG/L	.100	N/A
TOTAL TRIHALOMETHANES	UG/L	.500	350. (A1)
STYRENE	UG/L	.05	46.5 (D2)